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Bureau of Land Management**

**Environmental Assessment
DOI-BLM-WY-WY-040-EA11-213**

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May 2012 Lease Parcels

High Desert District Office
280 Highway 191 North
Rock Springs, Wyoming 82901



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BUREAU OF LAND MANAGEMENT
HIGH DESERT DISTRICT OFFICE
ENVIRONMENTAL ASSESSMENT FOR THE
MAY 2012 COMPETITIVE OIL AND GAS LEASE SALE
DOI-BLM-WY-WY-040-EA11-213

INTRODUCTION

Note: The draft Environmental Assessment (EA) issued for public review and comment on November 1, 2011, stated that a 40-acre portion of parcel WY-1205-046 in T15N, R95W, Section 20, SWSW extended into the Adobe Town Wilderness Study Area and was recommended for deletion from the May 2012 Oil and Gas Lease Sale. Subsequently, the Bureau of Land Management has determined that that portion of parcel 046 does not extend into the WSA and therefore is available for offering at the May lease sale. The EA has been appropriately modified to reflect the correct status for that 40-acre piece of parcel 046.

The Bureau of Land Management's (BLM) policy derived from various laws, including the Mineral Leasing Act of 1920 (MLA), as amended [30 U.S.C. 181 *et seq.*] and the Federal Land Policy and Management Act of 1976 (FLPMA), is to make mineral resources available for disposal and to encourage development of mineral resources to meet national, regional, and local needs.

As required under the MLA, the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA), and Title 43 Code of Federal Regulations (CFR) 3120.1-2(a), the BLM Wyoming State Office (WSO) conducts a quarterly competitive lease sale to sell available oil and gas lease parcels. A Notice of Competitive Oil and Gas Lease Sale, which lists lease parcels to be offered at the auction, is published by the BLM WSO at least 90 days before the auction is held. Lease stipulations applicable to each parcel are specified in the Sale Notice. The decision as to which public lands and minerals are open for leasing and what leasing stipulations may be necessary, based on information available at the time, is made during the land use planning process. Surface management/use for mineral extraction on non-BLM administered land overlaying federal minerals will be determined by BLM in consultation with the appropriate surface management agency or the private surface owner at the time such surface use is proposed by the leaseholder or designated agent. Under the Mineral Lease Act, issuing oil and gas leases is a discretionary authority conveyed to the Secretary of Interior. In accordance with this discretionary authority and as described in sections 1.3 and 2.0 below, certain parcels would be available for offer at the May 2012 lease sale and others would be deleted or deferred. In carry out the mineral leasing authority conveyed through the Mineral Leasing Act, BLM must comply with other applicable federal laws and regulations, including but not limited to the Endangered Species Act, the National Historic Preservation Act, the Clean Water Act, the Clean Air Act, and the Energy Policy Act.

As part of the May 2012 lease sale preparation process the BLM WSO submitted the draft parcel list to the High Desert District Office (HDD), Kemmerer Field Office (KFO), Rawlins Field Office (RFO), and Rock Springs Field Office (RSFO) for review and processing. (Note: The Pinedale Field Office had no parcels.) Interdisciplinary Teams (IDTs) in each Field Office, in coordination and consultation with the District Office, have reviewed the legal descriptions of the parcels to determine if they are in areas open to leasing; if appropriate stipulations have been included or additional stipulations are needed; whether or not new information is available since

the land use plan was approved; if appropriate consultations have been conducted or if additional consultations are needed; and if there are special resource conditions of which potential bidders should be made aware. This Environmental Assessment (EA) has been prepared by the HDD to document this review, as well as to disclose the affected environment, the anticipated impacts, and proposed mitigation of impacts.

This EA inclusively addresses 252 parcels (438,432.14 acres) located within three field offices in the High Desert District that have been nominated through “Expressions of Interest (EOI)” for the May 2012 Competitive Oil and Gas Lease Sale. Forty-five (45) of the nominated parcels containing 67,082.54 acres would be located entirely within the KFO; sixty-seven (67) parcels with 82,293.18 acres would be located in the RFO; and one hundred forty (140) parcels with 289,056.42 acres would be located entirely within the RSFO. Parcel WY-1205-212 extends across the Kemmerer and Rock Springs Field Office boundaries.

1.0 Purpose and Need

The BLM’s purpose for offering parcels and subsequent issuance of leases in the May 2012 lease sale is to provide areas for the potential exploration and development of additional oil and gas resources to help meet the nation’s current and expanding need for energy sources, while protecting other resource values in accordance with guiding laws, regulations, and Land Use Planning decisions and while protecting the City of Rawlins water supply area. Wyoming is a major source of natural gas for heating and electrical energy production in the United States. The offering for sale and subsequent issuance of oil and gas leases is needed to meet the requirements of MLA, FLPMA, and the minerals management objectives in the Kemmerer, Rawlins, and Green River Resource Management Plans (RMP). Oil and gas leasing provides oil and gas companies the opportunity to expand existing areas of production and to locate previously undiscovered oil and gas resources to help meet the public’s energy demands.

Decisions to be made based on this analysis include which parcels would be offered for lease, which parcels would be deferred from the May 2012 lease sale, which parcels are not available for leasing, and what stipulations will be placed on the parcels that would be offered for lease.

1.1 Conformance with Applicable Land Use Plan and Other Environmental Assessments

Pursuant to 40 CFR 1508.28 and 1502.21, this EA tiers to and conforms with the approved Kemmerer, Rawlins, and Green River RMPs and Final Environmental Impact Statements (FEIS) and to the associated Records of Decisions (ROD) for each Field Office. The impact analysis in the EISs for the affects from oil and gas development was based on and is commensurate with the Reasonably Foreseeable Development (RFD) scenario (i.e., the level of oil and gas development projected for the life of the plan based on historically and projected trends). The mitigation measures developed through those EISs reduced/minimized the anticipated impacts associated with the projected development to acceptable levels below the significance thresholds. The mitigation (i.e., stipulations and Best Management Practices (BMPs) developed through the RMP/EIS process are carried in to this EA, both through tiering and through actually application to individual parcels.

The Kemmerer, Rawlins, and Green River RMPs identify lands open, closed, and unavailable for leasing, and provide specific stipulations that would be attached to new leases offered in certain areas. Of the 67 parcels in the RFO, three (3) are completely unavailable for leasing based on decisions in the Rawlins RMP/ROD. Portions of four (4) additional Rawlins parcels fall within

areas that are unavailable for leasing. Of the 140 nominated parcels in the RSFO, six (6) parcels are completely unavailable for leasing based on decisions in the Green River RMP/ROD. Eight (8) additional parcels in the Rock Springs Field Office contain areas that are also unavailable for leasing. The unavailable parcels and portions of parcels are listed below. None of the parcels in the Kemmerer Field Office would be located in areas that are designated as unavailable for leasing.

The following parcels are unavailable for leasing and are DELETED in whole from this sale (these parcels will not be addressed any further in this EA):

1. WY-1205-029 – 325.97 acres within the Rawlins RMP Upper Muddy Creek/Grizzly Wildlife Habitat Management Area (WHMA);
2. WY-1205-037 – 40.00 acres within the Rawlins RMP Cow Butte/Wild Cow WHMA;
3. WY-1205-039 – 481.39 acres within the Rawlins RMP Upper Muddy Creek/Grizzly WHMA;
4. WY-1205-078 – 2040.00 acres within the Rock Springs Jack Morrow Hills (JMH) Coordinated Activity Plan (CAP), Area 3;
5. WY-1205-081 – 2496.38 acres within the Rock Springs JMH Area 3;
6. WY-1205-082 – 2520.00 acres within the Rock Springs JMH Area 3;
7. WY-1205-083 – 2120.00 acres within the Rock Springs JMH Area 3;
8. WY-1205-084 – 2200.00 acres within the Rock Springs JMH Area 3;
9. WY-1205-085 – 1400.00 acres within the Rock Springs JMH Area 3;

The following partial parcels falling within areas unavailable for leasing and are DELETED from this sale (these portions of these parcels will not be addressed any further in this EA):

1. WY-1205-026 40.000 Acres (Rawlins RMP Cow Butte/Wild Cow WHMA)
T.0150N, R.0890W, 06th PM, WY
Sec. 004 SWSW;
2. WY-1205-028 120.000 Acres (Rawlins RMP Cow Butte/Wild Cow WHMA)
T.0160N, R.0890W, 06th PM, WY
Sec. 023 SENW, SESW;
024 SWSW;
3. WY-1205-038 1440.000 Acres (Rawlins RMP Cow Butte/Wild Cow WHMA)
T.0150N, R.0900W, 06th PM, WY
Sec. 033 SWNE;
021 E2;
023 N2SE,SWSE;
026 W2NW;
027 N2NE,SWNE,NW,N2SW,SWSW;
028 NE,S2;
4. WY-1205-040 640.000 Acres (Rawlins RMP Upper Muddy Creek/Grizzly WHMA)
T.0180N, R.0910W, 06th PM, WY
Sec. 032 ALL;

5. WY-1205-079 640.000 Acres (Rock Springs JMH Area 3)
T.0270N, R.1010W, 06th PM, WY
Sec. 011 All;

6. WY-1205-080 640.000 Acres (Rock Springs JMH Area 3)
T.0270N, R.1010W, 06th PM, WY
Sec. 008 All;

7. WY-1205-086 1,096.05 Acres (In the Eastern Unit of the Wind River Front SRMA,
which is closed to mineral leasing under the 1997 Green River RMP/ROD)
T.0280N, R.1010W, 06th PM, WY
Sec. 003 Lots 4-5;
Sec. 004 Lots 1-8, S2;
Sec. 005 Lots 1-8, S2;

8. WY-1205-087 1508.420 Acres (Eastern Unit of the Wind River Front SRMA)
T.0280N, R.1010W, 06th PM, WY
Sec. 006 Lots 1-6, 9, 10, E2SW
Sec. 007 Lots 1, 4 ; NENW, SESW, NESE, SWSE;
Sec. 008 W2NE, SENE, NW, N2SW, SE
Sec. 009 W2, NE

9. WY-1205-090 1550.130 Acres (Eastern Unit of the Wind River Front SRMA)
T.0280N, R.1010W, 06th PM, WY
Sec. 017 NE, S2NW, S2;
Sec. 018 Lots 1-3, E2, E2W2;
Sec. 020 NESW, NWSE;
Sec. 029 NENW, SWNW;
Sec. 030 Lots 3-4, NESW, SESW, NWSE, NESE;

10. WY-1205-101 600.000 Acres (Rock Springs JMH Area 3)
T.0270N, R.1010W, 06th PM, WY
Sec. 012 NE, NENW, S2NW, S2;

11. WY-1205-105 320.000 Acres (Eastern Unit of the Wind River Front SRMA)
T.0280N, R.1010W, 06th PM, WY
Sec. 024 N2NW, N2NE, SENW, S2NE, NESE;

12. WY-1205-111 140.140 Acres (In the Red Creek Watershed of the Greater Red Creek
ACEC, which is closed to leasing under the 1997 Green River RMP/ROD.)
T.0120N, R.1030W, 06th PM, WY
Sec. 022 Lots 3-5;

Total acreage deleted from the May 2012 lease parcel offering: 22,218.34 acres.

1.2 Federal, State or Local Permits, Licenses or Other Consultation Requirements

Purchasers of oil and gas leases are required to obey all applicable federal, state, and local laws and regulations including obtaining all necessary permits required should lease development occur.

Interdisciplinary teams from each Field Office reviewed their respective lease parcel lists for this environmental assessment. Among other resource values, individual parcels may contain threatened, endangered, candidate, and BLM sensitive species (see Section 3.0 and Appendix B). The administrative act of offering parcels and subsequent issuance of oil and gas leases is consistent with the decisions in the Kemmerer, Rawlins, and Green River RMPs, including the decision relating to threatened, endangered, candidate, and BLM sensitive species. Offering and subsequent issuance of oil and gas leases is also consistent with the Biological Assessment and Biological Opinion (BA/BO) for these RMPs. No further consultation with the US Fish and Wildlife Service (USFWS) is required at this stage.

Compliance with Section 106 responsibilities of the National Historic Preservation Act (NHPA) can be achieved by following the BLM Wyoming-State Historic Preservation Officer (SHPO) protocol agreement, which is authorized by the National Programmatic Agreement between BLM, the Advisory Council on Historic Preservation, and the National Conference of SHPOs, and other applicable BLM handbooks.

1.3 Federal Leasing of Fluid Minerals

Analysis as required by the National Environmental Policy Act (NEPA) of 1969, as amended (Public Law 91-90, USC 4321 *et seq.*) was conducted by Field Office resource specialists who relied on personal knowledge of the areas involved and/or reviewed existing databases and file information to determine if appropriate stipulations had been attached to specific parcels before being made available for lease.

The offering and subsequent issuance of oil and gas leases is strictly an administrative action, which, in and of itself, does not cause or directly result in any surface disturbance. The issuance of an oil and gas lease, however, does convey to the lessee the rights to occupy, explore, and extract oil and gas resources from the lease with prior approval of the Authorized Officer. These post-leasing actions can result in surface impact.

As part of the lease issuance process, nominated parcels are reviewed against the appropriate land use plan, and stipulations are attached to mitigate any known environmental or resource conflicts that may occur on a given lease parcel. As stated above, on-the-ground impacts would potentially occur when a lessee applies for and receives approval to explore, occupy and/or drill on the lease. The BLM cannot determine at the leasing stage whether or not a nominated parcel will actually be leased, or if it is leased, whether or not the lease would be explored or developed. According to an estimate from the BLM Wyoming State Office Reservoir Management Division, since 1969, 75,192 leases totaling 57,612,690 Federal mineral acres have been leased in Wyoming. Of those, only 4,920 leases totaling 3,079,061 acres have produced some type of oil or gas in sufficient quantities that the lease was held by production. Therefore 6.5 percent of the leases sold and 5.3 percent of the acreage was actually developed into production. Based data extracted from the BLM Wyoming Oil and Gas Leasing webpage 88

percent of the parcels offered for lease over the past 10 years were leased. The remained 12 percent were not leased.

Additionally, according to the Tenth Circuit Court of Appeals, site-specific NEPA analysis at the leasing stage may not be possible absent concrete development proposals. Whether such site-specific analysis is required depends upon a fact-specific inquiry. Often, where environmental impacts remain unidentifiable until exploration can narrow the range of likely drilling sites, filing of an Application for Permit to Drill (APD) may be the first useful point at which a site-specific environmental appraisal can be undertaken (Park County Resource Council, Inc. v. U.S. Department of Agriculture, 10th Cir., April 17, 1987). In addition, the IBLA has decided that, "BLM is not required to undertake a site-specific environmental review before issuing an oil and gas lease when it previously analyzed the environmental consequences of leasing the land. . . ." (Colorado Environmental Coalition, et al, IBLA 96-243, decided June 10, 1999). However, when site-specific impacts are reasonably foreseeable at the leasing stage, NEPA requires the analysis and disclosure of such reasonably foreseeable site specific impacts. (N.M ex rel. Richardson v. BLM, 565 F.3d 683, 718-19 (10th Cir. 2009). BLM has not received any specific development proposals concerning the proposed lease parcels addressed in this EA. However, Parcels WY-1205-033 through 042, as well as a portion of parcel 025 fall within on near the Atlantic Rim (AR) Natural Gas Project Area. The AREIS addresses the reasonable foreseeable development and impacts for the project area. Parcels WY-1205-203, 204, 205, and 213-216 fall within or near the Moxa Arch Area (MAA) Infill Natural Gas Development Project Area. The Draft EIS for the MAA addresses the reasonable foreseeable development and impacts for the project area. Additional NEPA documentation would be prepared at the time an APD(s) or field development proposal is submitted for any of the May 2012 parcels that are leased. It is assumed that post-lease actions would be within the RFD analyzed in the EISs for the governing RMPs and that the impacts would also be within the thresholds of the RMPs/EISs as mitigated. This site-specific environmental documentation would provide site-specific analysis for the well pad location or locations. Additional mitigation and BMPs may be applied as conditions of approval (COA) at that time.

The Energy Policy Act of 2005 categorically excludes certain oil and gas development activities from further NEPA analysis. However, excluded projects must conform to the applicable RMP including any restrictions to development presented in the Plan.

Offering, sale and issuance of leases would not be in conflict with any local, county, or state plans.

Once a parcel is sold and the lease is issued, the lessee has the right to use so much of the leased lands as is reasonably necessary to explore and drill for all of the oil and gas within the lease boundaries, subject to the stipulations attached to the lease (43 CFR 3101.1-2).

Oil and gas leases are issued for a 10-year period and continue for so long thereafter as oil or gas is produced in paying quantities. If a lessee fails to produce oil and gas, does not make annual rental payments, does not comply with the terms and conditions of the lease, or relinquishes the lease, then ownership of the minerals leased revert back to the federal government and may be leased again.

Drilling wells on a lease is not permitted until the lessee or operator secures approval of a drilling permit and a surface use plan as specified in 43 CFR 3162.

1.4 Scoping and Public Involvement

1.4.1 Scoping

Internal BLM scoping determined the parcels individually or collectively contain one or more of the following resource issues or concerns:

- Crucial big game winter and parturition habitat
- Big Game Migration
- Sharp-tailed and Greater sage-grouse leks and nesting habitat
- Sharp-tailed and Greater sage-grouse key habitat areas
- Mountain plover nesting habitat
- Raptor nesting habitat
- Bald Eagle Roosts
- Sensitive Species
- Water depletion affects to downstream threatened and endangered fish species
- Sensitive soils
- Slopes greater than 25 percent
- Riparian and live water habitat
- Air quality, including greenhouse gases
- Surface and groundwater quality
- Wilderness characteristics
- Visual resource management (VRM)
- Recreation
- Socioeconomics
- Vegetation, including invasive non-native species
- Cultural and paleontological resources, including historic trails
- Leasable coal and sodium resources
- Proximity to residences
- Livestock grazing
- Watershed and hydrology
- Threatened/Endangered Species

1.4.2 Public Participation

Public participation was initiated when this EA was entered into the NEPA tracking database through the Rock Springs Field Office in September 2011. A news release was issued on November 1, 2011 notifying the public that the draft EA was posted on the BLM Wyoming website for a 30-day public comment period. As required by BLM leasing policy, where parcels are split estate, a notification letter soliciting EA review and comments were sent to the appropriate surface owner based on the surface owner information provided by the party submitting the Expressions of Interest (EOI).

PROPOSED ACTION AND ALTERNATIVES

2.0 Alternatives Including the Proposed Action

Two hundred and fifty-two (252) lease parcels (438,432.14 acres) were originally nominated and proposed for inclusion in the May 2012 Notice of Competitive Oil and Gas Lease Sale. Nine (9) full parcels and portions of thirteen (13) additional parcels fall within RMP designated areas that are unavailable for leasing and are therefore not analyzed under any alternative. In total 22,258.34 acres are unavailable for oil and gas leasing (see Section 1.1). Parcel WY-1205-252 is located on Federal lands administered by the Bureau of Reclamation.

2.1 Alternative A -- No Action

Under the No Action Alternative BLM Wyoming would not offer any of the 243 (416,173.80 acres) parcels available for lease at the May 2012 lease sale. This would mean that the 243 EOIs (i.e. parcel nominations) to lease would be denied or rejected and all 243 available lease parcels would be withdrawn from lease sale. It is not expected that demand for energy, including oil and gas, will go down. Choosing the No Action alternative would not prevent future leasing in these areas consistent with land use planning decisions and subject to appropriate stipulations, identified in the respective Kemmerer, Rawlins, and Green River RMPs. Therefore, it is anticipated that these parcels, excluding those that fall within areas designated as unavailable for leasing, would be nominated and reconsidered for offer at a future date.

2.2 Alternative B -- Proposed Action

Of the 243 parcels determined to be available for leasing under the referenced RMPs, BLM Wyoming would offer 136 full parcels and portions of 17 additional parcels for lease at the May 2012 Oil and Gas Lease Sale. The offered parcels contain 231,777.52 acres of federal minerals that are available for oil and gas leasing under the Kemmerer, Rawlins, and Green River RMPs/RODs. Standard terms and conditions/stipulations would apply. Lease stipulations (as required by 43 CFR 3101.1-3) are added to each parcel as identified by referenced RMPs to address site specific concerns. Refer to Appendix B for a list of the parcels and proposed stipulations attached to each.

Additionally, 82 whole parcels and 24 other parcels would be partially deferred and/or partially deleted from the May 2012 Oil & Gas Lease Sale (184,436.28 acres). These parcels would be deferred from the May 2012 oil and gas lease sale under this alternative pending completion of the Greater sage-grouse RMP amendment. Four (4) whole parcels and 1 partial parcel would be deferred pending completion of the Little Mountain Ecosystem Master Leasing Plan through the Green River RMP revision. One parcel plus a portion of a parcel would be deferred pending completion of an amendment to the Rawlins RMP to address municipal water supply springs for the City of Rawlins, WY. Portions of 8 additional parcels partially deleted and partially deferred. The net result is no portion of these eight parcels (WY-1205-079, 080, 086, 087, 090, 101, 105, and 111) would be available for offer under Alternative B. See Appendix A for a listing of the parcels and portions of parcels that would be deferred.

2.3 Alternative C-Maximum Parcels Offering

Alternative C would include the parcels available for offer as well as those proposed for deferral in Alternative B. This alternative would make approximately 416,213.80 acres from 243 parcels available for leasing. All other aspects of this alternative are the same as the proposed action.

2.4 Alternatives Considered But Not Analyzed in Detail

An alternative was considered that would offer all of the parcels that are administratively available for leasing with a no surface occupancy stipulation. This alternative was deleted from

detailed analysis because it does not meet the purpose and need of providing areas for the potential exploration and development of additional oil and gas resources to help meet the nation's current and expanding need for energy sources. Additionally, it would only prohibit surface occupancy for oil and gas development; whereas other non-oil & gas occupancy may not be similarly constrained. Further, it unnecessarily constrains oil and gas occupancy in areas where the Kemmerer, Rawlins, and Green River RMPs have determined that less restrictive stipulations would adequately mitigate the anticipated impact.

No other alternatives to the proposed action were identified that would meet the purpose and need of the proposed action.

AFFECTED ENVIRONMENT

3.0 DESCRIPTION OF AFFECTED ENVIRONMENT

This section describes the current environment and present conditions of various resources that would be affected by the project. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Prime or Unique Farmlands are not present on any of the parcels or partial parcels available for offer. All parcels were reviewed against the Greater sage-grouse key habitat requirements in BLM Wyoming IM WY-2010-013, and against the lands with wilderness characteristics (LWC) requirements in BLM Washington Office (WO) IM 2011-077, and against the Master Leasing Plan (MLP) requirements in WO IM 2010-117 and the approved BLM Wyoming Leasing Reform Implementation Plan. Parcels WY-1205-072, 093, 094, 095, 110, and a portion of parcel 111 are located in the Greater Little Mountain area identified in the implementation plan for MLP development. Parcels 093, 094, 095, 110, and a portion of parcel 111 would be deferred from oil and gas leasing pending completion of the MLP through the Green River RMP revision. Parcel 072 falls within the Chicken Spring federal oil and gas exploratory unit and under the December 2009 letter from the BLM Wyoming State Director to the Governor of Wyoming would be offer for lease. See Appendix C, D, and E for the sage-grouse, LWC, and MLP screens.

On July 15, 2011, the BLM Washington Office released IM 2011-147 titled "Identification of Areas with Broad Public Support for Possible Congressional Designation as Wilderness", which directed BLM State Directors to "*solicit input on potentially appropriate areas from State and local officials, tribes, and Federal land managers. Identified areas may include, but are not limited to, wilderness study areas, lands that have been documented as having wilderness characteristics through the maintenance of the Bureau's wilderness characteristics inventory, and areas for which designating legislation has been introduced into Congress.*"

The deadline for responding to the IM was September 1, 2011 and on August 24, 2011 the WY BLM responded to Washington indicating that BLM-WY had not identified any additional areas for consideration by Congress. However, the State Director did include all of the information it received in response to its request, including an unsolicited submittal from The Wilderness Society (TWS) and co-signatories. The TWS submittal did not meet the required criteria of IM 2011-147 in that neither TWS nor the co-signatories qualify as "state and local officials, tribes, and Federal land managers" and further the proposal was not for an area within a wilderness study area, was not for an area that is documented as having wilderness characteristics as identified through inventory, nor was it for an area that is currently under consideration by Congress.

3.1 SITE VISITS:

Parcels that are in areas unavailable to oil & gas leasing were not visited. For the most part, parcels recommended for deferral based on BLM-Wyoming IM WY-2010-013 and parcels recommended for deferral pending completion of the Little Mountain Ecosystem MLP also were not visited. Site visits were completed on 148 parcels.

The site visits revealed no resource values or concerns other than those already identified through their review of the parcels via the KFO, RFO, and RSFO Geographic Information System (GIS) data bases and National Agriculture Imagery Program (NAIP 2009) digital aerial imagery.

3.2 RESOURCE VALUES BY PARCEL:

Table 3.2 provides a detailed listing of the resource values (including visual, water, soils, vegetation, livestock grazing, solid minerals, watershed, special management areas, cultural, paleontology, and wildlife) associated with each of the parcels available for offering through Alternatives B and/or C at the May 2012 lease sale.

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-001	Rawlins	Entirely	N/A Private Surface	Yes	None Identified	Yes	Lower-elevation upland soils with a relatively thick, dark organic based surface, moderately to highly productive, generally stable with a low to moderate erosion potential. Parcel also contains some riparian soils that moderately deep, productive, with a low to moderate erosion potential.	10 to 14	N/A	A combination of grasslands and riparian dominated by grasses, forbs, sedges in the lower lying areas and agricultural croplands	None	Platte River	None	Yes	Overland Trail	No	No	Yes	None	No	Platte River fishes, Wyoming pocket gopher, mountain plover, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	None Identified
-002	Rawlins	Partially	3	No	None Identified	No	Mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Pine Grove/Bolton and East Sinclair	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Platte River	None	Yes	Lincoln Highway/UPRR Grade historic property	No	No	Yes	None	No	Platte River fishes, Wyoming pocket gopher, white-tailed prairie dog, mountain plover, persistent sepal yellowcress	No	No	Yes	Yes	None Identified
-003	Rawlins	Partially	3	No	None Identified	No	Mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Haystack	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Platte River	None	Yes	Lincoln Highway/UPRR Grade historic property	No	No	Yes	None	No	Platte River fishes, Wyoming pocket gopher, mountain plover, persistent sepal yellowcress, Beaver Rim phlox	No	CWR	Yes	No	None Identified
-004	Rawlins	Partially	3	No	None Identified	No	Mid-elevation stabilized sand dunes that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially in blowout areas that are actively moving.	10 to 14	Seminole and Tapers	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Platte River	None	Yes	None Identified	No	Yes	Yes	None	No	Platte River fishes, Wyoming pocket gopher,	No	No	No	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-005	Rawlins	No	3	Yes	None Identified	No	Mid-elevation stabilized sand dunes that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential, especially in blowout areas that are actively moving	10 to 14	Stone	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	None	No	Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	No	No	None Identified
-006	Rawlins	No	3	No	None Identified	No	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Stone	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	Lek	No	Wyoming pocket gopher, mountain plover,	No	No	No	No	None Identified
-007	Rawlins	No	3	Yes	None Identified	No	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Stone	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	Lek	No	Wyoming pocket gopher, persistent sepal yellowcress, potential habitat for sensitive reptilian & amphibian species	No	No	No	No	None Identified
-008	Rawlins	Partially	2	Yes	None Identified	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential.	15 to 19	Grieve Reservoir, Reader Basin, Battle Mountain Iso Track, Little Horse Mountain, and Road Gulch	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	The east end of Lot 12 in Section 5, T12N, R88W corner abuts the northwest corner of the Battle Mountain Research Natural Area on the Medicine Bow National Forest	Yes	None Identified	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	No	CWR & Parturition	Yes	Yes	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-009	Rawlins	Entirely	N/A Private Surface	Yes	Little Sandstone Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	Little Sandstone and Reader Basin	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	None Identified	No	Yes	Yes	Dancing Ground	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR & Parturition	Yes	No	None Identified
-010	Rawlins	Entirely	N/A Private Surface	Yes	None Identified	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	East Brown Hills	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	None Identified	No	Yes	Yes	Dancing Ground	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	No	Parturition	Yes	No	Yes
-011	Rawlins	Partially	2	Yes	Big Sandstone Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Hell Canyon, Cobb Cattle Iso Track, and M.J. Anderson Iso Track	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	None Identified	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, Laramie false sagebrush, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR & Parturition	Yes	No	None Identified
-012	Rawlins	Entirely	N/A Private Surface	Yes	Big Sandstone Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	Hell Canyon, Cobb Cattle Iso Track, and M.J. Anderson Iso Track	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	None Identified	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR & Parturition	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-013	Rawlins	Entirely	N/A Private Surface	Yes	Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Morgan Creek, Savery Creek, High Savery	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	High Savery Dam Special Management Area (SMA)	Yes	Cherokee Trail	No	Yes	Yes	Lek	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	No	No	Yes
-014	Rawlins	Entirely	N/A Private Surface	Yes	North & East Forks of Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	McCary, Savery Creek, Upper Savery Creek, and High Savery	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	High Savery Dam Special Management Area (SMA)	Yes	Cherokee Trail	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	None Identified
-015	Rawlins	Entirely	N/A Private Surface	Yes	Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	McCary, Savery Creek, Upper Savery Creek, and High Savery	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	Yes	Cherokee Trail	No	Yes	Yes	Lek and Dancing Ground	No	Colorado River fishes, Wyoming pocket gopher, Boreal Toad, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	Yes
-016	Rawlins	Partially	2	Yes	North Fork of Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	Morgan Creek and Sage Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Continental Divide National Scenic Trail SRMA	Yes	Cherokee Trail	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, pygmy rabbit, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route	
-017	Rawlins	Entirely	N/A Private Surface	Yes	North Fork of Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	Morgan Creek, Sage Creek, Truck Drivers Creek, and Savery Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Continental Divide National Scenic Trail SRMA	Yes	Cherokee Trail	No	Yes	Yes	Lek	No	Colorado River fishes, Wyoming pocket gopher, black-footed ferret, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	Yes	
-018	Rawlins	Entirely	N/A Private Surface	Yes	North Fork of Little Savery Creek	No	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Morgan Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	Yes	Cherokee Trail	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	CRCT	No	No	No	No	Yes
-019	Rawlins	Entirely	N/A Private Surface	Yes	Sage Creek	No	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	15 to 19	Sage Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Platte River	None	Yes	None Identified	No	Yes	Yes	None	No	Platte River fishes, Wyoming pocket gopher, Boreal toad, Black-footed ferret, Laramie false sagebrush, Beaver Rim phlox, potential habitat for sensitive reptilian & amphibian species	No	No	No	No	No	Yes
-020	Rawlins	Partially	3	Yes	Miller Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14 and 15 to 19	Pine Grove/Bolton	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Platte River	None	Yes	Overland Trail	No	No	Yes	None	No	Platte River fishes, Wyoming pocket gopher, Boreal toad, Black-footed ferret, mountain plover, potential habitat for sensitive reptilian & amphibian species	No	No	Yes	No	Yes	

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-021	Rawlins	No	3	Yes	None Identified	No	mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon, soil productivity is low, barren areas do occur, these soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Stone and Browns Canyon	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	none	No	None Identified	No	Yes	Yes	None	No	Wyoming pocket gopher, mountain plover, persistent sepal yellowcress, potential habitat for sensitive reptilian & amphibian species	No	No	No	No	None Identified
-022	Rawlins	No	3	Yes	None Identified	No	mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon, soil productivity is low, barren areas do occur, these soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Stone and Browns Canyon	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	None	No	Wyoming pocket gopher, mountain plover, potential habitat for sensitive reptilian & amphibian species	No	No	No	No	None Identified
-023	Rawlins	No	3	No	None Identified	No	mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon, soil productivity is low, barren areas do occur, these soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Browns Canyon	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	No	Yes	None	No	Wyoming pocket gopher, mountain plover	No	No	No	No	None Identified
-024	Rawlins	No	3	Yes	None Identified	No	mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon, soil productivity is low, barren areas do occur, these soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Stone	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	No	No	None	No	Mountain plover, Black-footed ferret, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	No	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-025	Rawlins	Entirely	N/A Private Surface	Yes	Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Morgan-Boyer Subunit, East Browns Hill, Hell Canyon, Rasmussen Subunit, and M.J. Anderson Iso Track	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	Cherokee Trail	No	Yes	Yes	Dancing Ground	No	Colorado River fishes, Goshawk, Boreal toad, Beaver Rim phlox, Meadow pussytoes, Laramie false sagebrush, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR & Parturition	Yes	No	None Identified
-026	Rawlins	Partially	3	Yes	Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Savery Creek, Rasmussen Subunit, North Rasmussen, McCary, and Standard	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	Cow Butte/Wild Cow WHMA	Yes	Cherokee Trail	No	Yes	Yes	leks	No	Colorado River fishes, Boreal toad, Black-footed ferret, Beaver Rim phlox, Meadow pussytoes, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	None Identified
-027	Rawlins	Partially	3	Yes	Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	McCary	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	None	Yes	Cherokee Trail	No	Yes	Yes	None	No	Colorado River fishes, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	None Identified
-028	Rawlins	Partially	2 & 3	Yes	Little Savery Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Grizzly, McCarty Canyon	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Cow Butte/Wild Cow WHMA	Yes	None Identified	No	Yes	Yes	None	No	Colorado River fishes, Ferruginous hawk, Boreal toad, Beaver Rim phlox, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	No	Yes	No	Yes
-029	Rawlins	The entire parcel is located in the Upper Muddy/Grizzly WHMA and is unavailable for oil and gas leasing.																								

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-030	Rawlins	Partially	3	Yes	None Identified	Yes	Mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 %	7 to 9	Stewart Creek and Separation Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	Yes	Rawlins to Fort Washakie Road	No	Yes	Yes	None	No	Ferruginous Hawk, Mountain plover, White-tailed prairie dog, Black-footed ferret, Persistent sepal yellowcress, Beaver Rim phlox, pygmy rabbit, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	None Identified
-031	Rawlins	No	3	Yes	None Identified	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Stewart Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	Rawlins to Fort Washakie Road	No	No	Yes	None	No	Ferruginous Hawk, Mountain plover, White-tailed prairie dog, Black-footed ferret, Persistent sepal yellowcress, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	None Identified
-032	Rawlins	No	3	Yes	None Identified	No	Mid-elevation basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 %	7 to 9	Stewart Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	Rawlins to Fort Washakie Road	No	Yes	Yes	None	No	Ferruginous Hawk, Mountain plover, White-tailed prairie dog, Black-footed ferret, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-033	Rawlins	No	3	Yes	None Identified	No	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Cherokee	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	No	None Identified	No	Yes	Yes	Lek	No	Colorado River fishes, Boreal Toad, Beaver Rim phlox, Wyoming tansymustard, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	Yes
-034	Rawlins	No	3	Yes	None Identified	No	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Cherokee	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	No	None Identified	No	No	Yes	None	No	Colorado River fishes, Beaver Rim phlox, Wyoming tansymustard, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	Yes	No	Yes
-035	Rawlins	No	3	Yes	None Identified	No	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Cherokee	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	no	Cherokee Trail	No	No	Yes	Leks	No	Colorado river fishes, Ferruginous Hawk, White-tailed prairie dog, Black-footed ferret, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	No	Yes	No	Yes
-036	Rawlins	Partially	3	Yes	None Identified	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Cherokee and Deep Creek	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	None	Yes	Cherokee Trail	No	No	Yes	None	No	Colorado river fishes, White-tailed prairie dog, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	No	Yes	No	None Identified
-037	Rawlins	The entire parcel is located in the Cow Butte/Wild Cow WHMA and is unavailable for oil and gas leasing.																								

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-038	Rawlins	No	3	Yes	South Fork Cherokee Creek and Cherokee Creek	Yes	high-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, are generally productive and are generally stable but do have areas with moderate or greater erosion potential	10 to 14	Cherokee, Smiley Draw, and Rasmussen Subunit	mixture of timber, sagebrush, and shrublands with a variety of forbs and grasses	None	Colorado River	Cow Butte/Wild Cow WHMA	No	Cherokee Trail	No	Yes	Yes	Leks	No	Colorado river fishes, Goshawk, Boreal toad, Black-footed ferret, Beaver Rim phlox, Gibben's beardtounge, Meadow Pusytoes, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR	Yes	No	Yes
-039	Rawlins	The entire parcel is located in the Upper Muddy/Grizzly WHMA and is unavailable for oil and gas leasing.																								
-040	Rawlins	No	3	No	None Identified	No	Mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas. They have a thin organic based surface horizon. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Badwater	sagebrush dominated shrublands with a variety of forbs and grasses	None	Colorado River, Great Divide Basin	Upper Muddy Creek/Grizzly WHMA,	No	Overland Trail	No	Yes	Yes	Lek	No	Colorado Fishes ,Ferruginous hawk, Mountain plover, persistent sepal yellowcress, and Wyoming pocket gopher	No	CWR	Yes	No	None Identified
-041	Rawlins	No	3	No	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential.	7 to 9 inches	East Muddy	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Colorado River	None	No	Rawlins to Baggs Road	No	No	Yes	None	No	Colorado River fishes ,Ferruginous hawk, Mountain Plover, White-tailed prairie dog, Black-footed ferret, Wyoming pocket gopher	No	CWR	Yes	No	None Identified
-042	Rawlins	No	3	no	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential.	7 to 9 inches	East Muddy	Sagebrush dominated shrublands with a variety of forbs and shrubs	None	Colorado River	None	No	Rawlins to Baggs Road	No	No	Yes	None	No	Colorado River fishes, Ferruginous hawk, Mountain plover, White-tailed prairie dog, Black-footed ferret, Wyoming pocket gopher	No	CWR	Yes	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-043	Rawlins	No	3	Yes	Little Snake River	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas occur. These soils have a moderate or greater erosion potential.	7 to 9 inches	Powder Rim Rotation	Sagebrush dominated shrublands with riparian dominated zones	None	Colorado River	None	No	None Identified	No	No	Yes	None	No	Colorado River Fishes, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	CRCT	CWR	Yes	Yes	None Identified
-044	Rawlins	No	3	Yes	None Identified	No	Mid-elevation upland soils that are generally shallow, with a depth to bedrock of less than 20 inches occurring in areas. They have a thin organic based surface horizon. They are moderately productive and are generally stable but do have areas with moderate or greater erosion potential	7 to 9	Sand Creek and Red Creek	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Colorado River	None	No	Cherokee Trail	No	No	Yes	None	No	Colorado River, Fish, Burrowing owl, Great Basin spadefoot, Black-footed ferret, Gibben's beardtongue, and Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	None	Yes	No	None Identified
-045	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential	7 to 9	Willow Creek	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Colorado River	Adobe Town Dispersed Recreation Use Area	No	None Identified	No	No	Yes	None	No	Colorado River Fishes, Mountain plover, and Wyoming pocket gopher potential habitat for sensitive reptilian & amphibian species	No	CWR	No	No	None Identified
-046	Rawlins	No	3	No	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential	7 to 9	Willow Creek	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Colorado River	Adobe Town Dispersed Recreation Use Area and Adobe Town WSA	No	None Identified	No	No	Yes	None	No	Colorado River Fishes, Wyoming pocket gopher	No	CWR	Yes	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-047	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential	7 to 9	Cyclone Rim	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	None	No	Ferruginous hawk, Mountain plover, Persistent sepal yellowcress, Wyoming Pocket Gopher, potential habitat for sensitive reptilian & amphibian species	No	None	Yes	No	None Identified
-048	Rawlins	No	3	Yes	Lost Creek	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential	7 to 9	Cyclone Rim	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	None	No	Ferruginous hawk, Mountain plover, Persistent sepal yellowcress, Wyoming Pocket Gopher, potential habitat for sensitive reptilian & amphibian species	No	None	Yes	No	None Identified
-049	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential	7 to 9	Cyclone Rim	Sagebrush dominated shrublands with a variety of forbs and grasses	None	Great Divide Closed Basin	None	No	None Identified	No	Yes	Yes	Lek	No	Ferruginous hawk, Mountain plover, Persistent sepal yellowcress, Wyoming Pocket Gopher, potential habitat for sensitive reptilian & amphibian species	No	None	Yes	No	None Identified
-050	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, Mountain plover, Wyoming pocket gopher, Persistent sepal yellowcress, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-051	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, Mountain plover, Wyoming pocket gopher, Persistent sepal yellowcross, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified
-052	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, Mountain plover, Wyoming pocket gopher, Persistent sepal yellowcross, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified
-053	Rawlins	No	3	yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, Wyoming pocket gopher, Persistent sepal yellowcross, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified
-054	Rawlins	No	3	Yes	None Identified	no	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	no	yes	None	no	Ferruginous hawk, mountain plover, Wyoming pocket gopher, Persistent sepal yellowcross, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-055	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	no	yes	None	no	mountain plover, Wyoming pocket gopher, Persistent sepal yellowcress	No	no	no	no	None Identified
-056	Rawlins	No	3	No	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	no	yes	None	no	mountain plover, Wyoming pocket gopher, Persistent sepal yellowcress	No	no	no	no	None Identified
-057	Rawlins	No	3	No	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, mountain plover, Wyoming pocket gopher, White-tailed prairie dog	No	no	yes	no	None Identified
-058	Rawlins	No	3	No	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	Ferruginous hawk, mountain plover, Wyoming pocket gopher	No	no	yes	no	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-059	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	Yes	None Identified	No	yes	yes	None	no	Ferruginous hawk, mountain plover, Wyoming pocket gopher, Persistent sepal yellowcress, potential habitat for sensitive reptilian & amphibian species	No	no	yes	no	None Identified
-060	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	Yes	None Identified	No	yes	yes	None	no	mountain plover, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	no	no	no	None Identified
-061	Rawlins	No	3	Yes	None Identified	No	Basin soils that are generally very shallow, with a depth to bedrock of less than 20 inches occurring in areas, they have a very thin organic based surface horizon. Soil productivity is low. Barren areas do occur. These soils have a moderate or greater erosion potential, especially on slopes greater than 25 percent	7 to 9	Cyclone Rim	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Great Divide Closed Basin	None	No	None Identified	No	yes	yes	None	no	mountain plover, Persistent sepal yellowcress, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	no	no	no	None Identified
-062	Rawlins	No	3	Yes	None Identified	Yes	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Little Powder Mountain	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Adobe Town Dispersed Recreation Use Area	Yes	Cherokee Trail	No	no	yes	None	no	Colorado river fishes, mountain plover, Ownbey's thistle, Wyoming pocket gopher, Meadow pussytoes, potential habitat for sensitive reptilian & amphibian species	No	CWR	yes	no	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-063	Rawlins	No	3	Yes	None Identified	Yes	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Crooked Wash	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Adobe Town Dispersed Recreation Use Area	Yes	Cherokee Trail	No	no	yes	None	no	Colorado river fishes, Ferruginous hawk, mountain plover, Ownbey's thistle, stemless beardtongue, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	yes	no	None Identified
-064	Rawlins	No	3	Yes	None Identified	Yes	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Little Powder Mountain	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Adobe Town Dispersed Recreation Use Area	Yes	Cherokee Trail	No	no	yes	None	no	Colorado river fishes, Ferruginous hawk, mountain plover, large fruited bladderpod, Ownbey's thistle, Wyoming pocket gopher, potential habitat for sensitive reptilian & amphibian species	No	CWR	yes	no	None Identified
-065	Rawlins	No	3	Yes	None Identified	Yes	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Little Powder Mountain	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Adobe Town Dispersed Recreation Use Area	No	Cherokee Trail	No	no	yes	None	no	Colorado river fishes, Wyoming pocket gopher, mountain plover, Ownbey's thistle, potential habitat for sensitive reptilian & amphibian species	No	CWR	no	no	None Identified
-066	Rawlins	No	3	Yes	None Identified	No	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	Crooked Wash	sagebrush dominated shrublands with a variety of forbs and grasses.	None	Colorado River	Adobe Town Dispersed Recreation Use Area	No	Cherokee Trail	No	no	yes	None	no	Colorado River fishes, Wyoming pocket gopher, ferruginous hawk, potential habitat for sensitive reptilian & amphibian species	No	CWR	yes	no	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-067	Rock Springs	No	3	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Red Desert	Moderate density with some sagebrush and sagebrush steppe	None	Great Divide Basin	Red Desert Watershed SMA	No	None	5	No	Yes	No	No	Pygmy Rabbit, White-tailed Prairie dog, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-068	Rock Springs	No	3	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Red Desert	Moderate density with some sagebrush and sagebrush steppe	None	Great Divide Basin	Red Desert Watershed SMA	No	None	5	No	Yes	No	No	Pygmy Rabbit, White-tailed Prairie dog, Mountain Plover, white-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-069	Rock Springs	No	4	Yes	Black Butte Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Rock Springs	Vegetation in the area is of moderate density with some sagebrush, sagebrush steppe and salt desert shrub communities (where alkaline soils predominate)	Coal	Colorado River	None	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy rabbit, white-tailed prairie dog, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No	
-070	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Rock Springs	moderate density with fairly contiguous sagebrush communities.	Coal	Colorado River	None	No	Part of the parcel (section 2) is within the view shed of the Overland trail.	5	No	Yes	No	No	Colorado river fishes, Pygmy rabbit, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-071	Rock Springs	No	4	Yes	Bitter Creek	No	Deep, poorly to well drained soils formed on nearly level or sloping floodplains or sloping floodplains, bottomlands and alluvial fans, and draws	7 to 9	Rock Springs	moderate density with limited sagebrush, but fairly contiguous greasewood communities	Coal	Colorado River	None	No	Parcel straddles the Overland Trail.	5	No	Yes	No	No	Colorado river fishes, Pygmy rabbit, Wyoming pocket gopher, white-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-072	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Pine Mountain	Moderate density with saltbush and sagebrush communities	Coal	Colorado River	Pine Mountain SMA	No	This parcel straddles the Rock Springs to Browns Park wagon road, the Cherokee Trail and the Browns Park telegraph line.	5	Yes	Yes	No	Yes	Pygmy rabbit, White-tailed prairie dog, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
073	Rock Springs	No	4	Yes	East Salt Wells Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	Moderate density with saltbush and sagebrush communities	Coal	Colorado River	None	No	Parcel is within the view shed of the Rock Springs to Browns Park wagon road.	5	Yes	Yes	No	No	Colorado river fishes, White-tailed prairie dog, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-074	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	low density, sagebrush and sagebrush steppe	Coal	Colorado River	None	No	Parcel is within the view shed of the Rock Springs to Browns Park wagon road.	5	Yes	Yes	No	No	Colorado river fishes, pygmy rabbit, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-075	Rock Springs	Yes	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	low density, sagebrush and sagebrush steppe	Coal	Colorado River	None	Yes	Parcel is within the view shed of the Rock Springs to Browns Park wagon road.	5	Yes	Yes	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-076	Rock Springs	No	4	Yes	East Salt Wells Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	Moderate density with some sagebrush and salt desert shrub communities (where alkaline soils predominate)	Coal	Colorado River	None	No	Parcel is within the view shed of the Rock Springs to Browns Park wagon road.	5	Yes	Yes	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-077	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Rock Springs	Moderate density with fairly contiguous sagebrush communities	Coal	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-078	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
079	Rock Springs	No	2	Yes	Dickie Springs Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Bar X, Continental Peak	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC	No	Parcel straddles National Historic Trail (Emigrant Trail = Oregon, California, Mormon-Pioneer, and Pony Express).	5	Yes	Yes	No	No	Platte River fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
080	Rock Springs	No	2	Yes	Pacific Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Bar X, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC	No	Parcel straddles the National Historic Trails.	5	Yes	Yes	Lek	No	Platte River fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	Parturition	Yes	Yes	No
-081	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									
-082	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									
-083	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									
-084	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									
-085	Entire parcel is located in Area 3 (No leasing) of Jack Morrow Hills CAP																									
-086	Rock Springs	No	2	Yes	Fish Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Gold Creek, Pine Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC	No	Parcel straddles the Lander Cutoff of the Oregon Trail, the Bryan to South Pass City Stage road.	5	Yes	Yes	No	No	Platte River fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-087	Rock Springs	No	2	Yes	Sharps Meadows Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Gold Creek, Pine Creek, Fish Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC	No	Parcel straddles the Lander Cutoff of the Oregon Trail, the Bryan to South Pass City Stage road.	5	Yes	Yes	Lek	No	Platte River fishes, Pygmy Rabbit, White-Faced Ibis, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-088	Rock Springs	No	2	Yes	Fish Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Pine Creek, Fish Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Trails ACEC	No	Parcel straddles the Lander Cutoff of the Oregon Trail.	5	Yes	Yes	Lek	No	Platte River fishes, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-089	Rock Springs	No	2	Yes	Fish Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Pine Creek, Fish Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landmark ACEC	No	Parcel is within the view shed of the Emigrant trail.	5	Yes	Yes	Lek	No	Platte River fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-090	Rock Springs	No	2,4	Yes	Sharps Meadows Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Gold Creek, Pine Creek, Bar X, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC, Windriver Front SRMA; Area 1 (Open to leasing) of JMHCAP	No	Parcel is within the view shed of the Emigrant Trail. The parcel also crosses the Bryan to South Pass City stage road.	5	Yes	Yes	No	No	Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-091	Rock Springs	No	2	Yes	Sweetwater River	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Fish Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC	No	Parcel is within the view shed of the Emigrant Trail.	5	Yes	Yes	Lek	No	Platte River fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-092	Rock Springs	No	2	No	No	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	Bar X, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Platte River	South Pass Historic Landscape ACEC, Back Country Byway; Area 1 (Open to leasing) of JMHCAP	No	Parcel is within the view shed of the Emigrant Trail. The parcel also contains the Bryan to South Pass City stage road.	5	Yes	Yes	Lek	No	Platte River fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	Yes	No
-093	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	Moderate density, sagebrush and sagebrush steppe	Coal	Colorado River	None	No	Parcel straddles the Rock Springs to Browns Park wagon road, which is unevaluated as to NHRP eligibility.	3	Yes	Yes	No	No	Colorado river fishes, White-faced ibis, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
094	Rock Springs	No	4	Yes	East Salt Wells Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	Moderate density, sagebrush and sagebrush steppe	Coal	Colorado River	None	No	Parcel straddles the Rock Springs to Browns Park wagon road, which is unevaluated as to NHRP eligibility.	3,5	Yes	Yes	No	Yes	Colorado river fishes, White-faced ibis, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-095	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Vermillion Creek	Moderate density with saltbush and sagebrush communities	Coal	Colorado River	None	No	Parcel straddles the Rock Springs to Browns Park wagon road.	3,5	Yes	Yes	No	No	Colorado river fishes, White-tailed prairie dog, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-096	Rock Springs	No	4	No	No	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Pacific Creek	High density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Part of parcel is within the view shed of the National Historic Trails.	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-097	Rock Springs	No	2,4	No	No	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Pacific Creek	High density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Part of parcel is within the view shed of the National Historic Trails.	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-098	Rock Springs	No	2,4	No	No	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Bush Rim, Pacific Creek	High density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is known to contain the Ft Washakie military road. The road is currently unevaluated as to its National Register of Historic Places (NRHP) eligibility.	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-099	Rock Springs	No	4	Yes	Alkali Creek	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Bush Rim, Pacific Creek	moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-100	Rock Springs	No	4	Yes	Alkali Creek	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	White Acorn, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is known to contain the Ft Washakie military road. The road is currently unevaluated as to its National Register of Historic Places (NRHP) eligibility.	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
101	Rock Springs	No	2	Yes	West Pacific Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	White Acorn, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel contains the Emigrant trail and contains the Green River to South Pass City stage road, the Bryan to South Pass City stage road, the Lander to Pinedale Road (unevaluated as to its NRHP status).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	Parturition	Yes	No	No
-102	Rock Springs	No	2,4	Yes	West Pacific Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel contains Emigrant Trail and also contains the Bryan to South Pass City stage road and the Lander to Pinedale Road (unevaluated as to its NRHP status).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, White-Faced Ibis, Wyoming Pocket Gopher, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-103	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel is within the view shed of the Emigrant Trail.	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Wyoming Pocket Gopher, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-104	Rock Springs	No	2,4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel straddles the Emigrant trail.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit, Wyoming Pocket Gopher, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-105	Rock Springs	No	2,4	Yes	West Pacific Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front SRMA, Back Country Byway	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-106	Rock Springs	No	4	Yes	Hay Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-107	Rock Springs	No	4	Yes	Hay Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA,	No	Parcel contains the Bryan to South Pass City Stage road and the Lander to Pinedale road.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-108	Rock Springs	No	2,4	Yes	West Pacific Creek	No	Deep, well drained sandy, loamy, and gravelly soils formed on rolling plains, terraces, fans and areas of valley fill. Elevation ranges from 7000 to 8500 ft.	10 to 14	White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA, South Pass Historic Landscape ACEC	No	Parcel is within the view shed of the NHT (Emigrant trail).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-109	Rock Springs	No	4	Yes	West Pacific Creek, Hay Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the National Historic Trails. Parcel straddles the Pinedale to Lander road, which is unevaluated as to NRHP eligibility.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-110	Rock Springs	No	3	No	No	Yes	Shallow to deep, well drained soils formed on steep mountain slopes. This unit is subject to landslides. Elevation ranges from 7500 to 9000 ft.	12 to 19	Pine Mountain	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Pine Mountain ACEC	No	None	5	Yes	Yes	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR/ Parturition	Not Identified	No	No
111	Rock Springs	No	3	Yes	Canyon Creek	Yes	Shallow to deep, well drained soils formed on steep mountain slopes. This unit is subject to landslides. Elevation ranges from 7500 to 9000 ft.	12 to 19	Pine Mountain	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Pine Mountain ACEC	No	None	5	No	No	No	No	Colorado river fishes, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR/ Parturition	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-112	Rock Springs	No	2,4	No	No	No	Shallow and moderately deep, well drained soils formed on sloping upland plains with deep, steep-sided ravines. Elevation ranges from 7000 to 7500 ft.	10 to 14	Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel contains the Bryan to South Pass stage road, eligible for nomination to the NRHP.	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-113	Rock Springs	No	4	No	No	No	Shallow and moderately deep, well drained soils formed on sloping upland plains with deep, steep-sided ravines. Elevation ranges from 7000 to 7500 ft.	10 to 14	Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-114	Rock Springs	No	4	Yes	Pacific Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	Yes	No
-115	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect, White Acorn	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel contains the Lander to Pinedale stage road (NRHP status is unevaluated).	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit, Wyoming Pocket Gopher, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-116	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel contains the Lander to Pinedale stage road (NRHP status is unevaluated).	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, White-Faced Ibis, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-117	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	Yes	No
-118	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect, White Acorn	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Wyoming Pocket Gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-119	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Deep, well drained alluvial soils formed on sloping alluvial fans and mountain toe slopes. Elevation ranges from 6500 to 7500 ft.	10 to 14	Little Prospect	High density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail). It also contains the Dry Sandy Swales site.	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-120	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail), it also contains the Dry Sandy Swales site.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-121	Rock Springs	No	2,4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect, White Acorn, Pacific Creek	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	South Pass Historic Landscape ACEC	No	Parcel straddles the NHT (Emigrant trail) and also contains the Bryan to South Pass City stage road.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Wyoming Pocket Gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-122	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail). Parcel also contains the Dry Sandy Swales site.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Wyoming Pocket Gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-123	Rock Springs	No	4	Yes	North Pacific Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is within view shed of NHT.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Wyoming Pocket Gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-124	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-125	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-126	Rock Springs	No	4	Yes	Little Mitchell Slough	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-127	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect, White Acorn	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel is within the view shed of the Lander Cutoff (NHT).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-128	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-129	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-130	Rock Springs	No	4	Yes	Hay Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect, White Acorn	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-131	Rock Springs	No	4	Yes	Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-132	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-133	Rock Springs	No	4	No	No	No	Deep, sand dunes intermingled with moderately deep and shallow, well drained soils formed on rolling upland plains. Elevation ranges from 6100 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is within view shed of NHT (Emigrant trail).	5	Yes	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-134	Rock Springs	No	4	Yes	Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy, Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-135	Rock Springs	No	4	Yes	little Sandy Creek, Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-136	Rock Springs	No	4	Yes	Little Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy, Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is within view shed of NHT (Emigrant trail).	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-137	Rock Springs	No	4	Yes	Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel is within view shed of NHT (Emigrant trail).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-138	Rock Springs	No	4	Yes	Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail).	5	Yes	Yes	Lek	No	Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No
-139	Rock Springs	No	4	Yes	Juel Creek, Dry Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Parcel straddles the NHT (Emigrant trail).	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Mountain Plover; white-tailed prairie dog; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Yes	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-140	Rock Springs	No	4	Yes	Little Mitchell Slough, Mitchell Slough	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Sandy, Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-141	Rock Springs	No	4	Yes	Little Mitchell Slough	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	Parcel contains the Lander to Pinedale road. (NRHP status is unevaluated).	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-142	Rock Springs	No	4	Yes	Little Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Long-Billed curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-143	Rock Springs	No	4	Yes	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Prospect	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-144	Rock Springs	No	4	Yes	Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Sandy	moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-145	Rock Springs	No	4	Yes	Little Sandy Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	High density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; White-faced ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-146	Rock Springs	No	4	Yes	Juel Creek	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-147	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; White-Faced ibis; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-148	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; Long-Billed curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-149	Rock Springs	No	4	Yes	Yes, Unknown	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; White-Faced ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-150	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Prospect Mountain, Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	Yes	No
-151	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Elevation ranges from 7000 to 7500 ft.	10 to 14	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-152	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Prospect Mountain, Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; Long-billed curlew; Mountain Plover; white-tailed prairie dog; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-153	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-154	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-155	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Little Sandy	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	Windriver Front West SRMA	No	None	5	Yes	Yes	Lek	Yes	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-156	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-157	Rock Springs	No	3,4	Yes	Henry's Fork	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent sagebrush communities	None	Colorado River	None	No	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	No	No	No	Colorado river fishes, White-faced ibis, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	CRCT	CWR	Not Identified	No	No
-158	Rock Springs	No	3,4	Yes	Henry's Fork	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent sagebrush communities	None	Colorado River	None	No	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	No	No	No	Colorado river fishes, White-faced ibis, Wyoming pocket gopher, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	CRCT	CWR	Not Identified	No	No
-159	Rock Springs	No	2,3	Yes	Cottonwood Creek, People's Canal	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent sagebrush communities and riparian areas	None	Colorado River	None	No	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	Yes	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-160	Rock Springs	No	2	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	Sodium	Colorado River	Pine Springs Expanded SMA	No	The parcel is within the expanded area for the Pine Springs SMA, which contains cultural values.	5	No	No	No	No	Colorado river fishes, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-161	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-tailed prairie dog, Mountain Plover Habitat, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-162	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-163	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-164	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-165	Rock Springs	No	3,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-166	Rock Springs	No	2	No	No	No	Rock outcrop and shallow, well drained soils formed on steep ridges, escarpments, and mountain slopes. Included in this unit are some areas of badlands. Elevation ranges from 6000 to 8000 ft.	8 to 14	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	Sodium	Colorado River	Pine Springs Expanded SMA	No	The parcel is within the expanded area for the Pine Springs SMA, which contains cultural values.	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-167	Rock Springs	No	2	No	No	No	Rock outcrop and shallow, well drained soils formed on steep ridges, escarpments, and mountain slopes. Included in this unit are some areas of badlands. Elevation ranges from 6000 to 8000 ft.	8 to 14	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	Sodium	Colorado River	Pine Springs ACEC	No	Parcel will be visible from Pine Spring ACEC, which contains cultural values.	5	No	No	No	No	Colorado river fishes, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-168	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit, White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-169	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile, Lombard	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	Much of the parcel is located within the 3 mile view shed of the Emigrant Trail.	5	Yes	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit, White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-170	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile	Moderate density with fairly contiguous sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Pygmy Rabbit, White-Faced Ibis; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-171	Rock Springs	No	3,4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Antelope Wash, Cottonwood Creek	Moderate density with primarily sagebrush/ sagebrush steppe and some riparian communities	None	Colorado River	None	No	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	Yes	Lek	No	Colorado river fishes, White-faced Ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike,	None	CWR	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-172	Rock Springs	No	3,4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cottonwood Creek	Moderate density with primarily sagebrush/ sagebrush steppe and some riparian communities	None	Colorado River	None	No	None	5	No	Yes	Lek	No	Colorado river fishes, Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-173	Rock Springs	No	4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Antelope Wash, Cedar Point	Moderate density sagebrush with some juniper and riparian communities	None	Colorado River	None	No	None	5	No	Yes	Lek	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-174	Rock Springs	No	4	Yes	Cottonwood Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Antelope Wash, Circle Bar, Cottonwood Creek	Moderate density sagebrush with some juniper and riparian communities	None	Colorado River	None	No	None	5	No	Yes	Lek	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-175	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Light to moderate density with fairly light sagebrush and rabbit brush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-176	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-177	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-178	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-179	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	Special Status Plants ACEC	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-180	Rock Springs	No	3,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-181	Rock Springs	No	3,4	Yes	Henry's Fork	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	Special Status Plants ACEC	No	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	No	No	No	Colorado river fishes, White-faced ibis, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	CRCT	CWR	Not Identified	Yes	No
-182	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-183	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-184	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with fairly contiguous sagebrush and saltbush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-185	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with fairly contiguous sagebrush and saltbush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-186	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-187	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-188	Rock Springs	No	2	No	No	No	Rock outcrop and shallow, well drained soils formed on steep ridges, escarpments, and mountain slopes. Included in this unit are some areas of badlands. Elevation ranges from 6000 to 8000 ft.	8 to 14	Cedar Mountain	Moderate density with limited juniper, intermittent sagebrush and saltbush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-189	Rock Springs	No	2,4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with fairly contiguous sagebrush and saltbush communities	Sodium	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-190	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	The parcel is within the 3 mile view shed of the Emigrant Trail.	5	Yes	Yes	No	No	Colorado river fishes, Pygmy Rabbit, Mountain Plover, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-191	Rock Springs	No	4	Yes	Slate Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile	Moderate density with fairly contiguous sagebrush communities	None	Colorado River	None	No	None	5	No	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-192	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Figure Four	Moderate density with sagebrush communities	None	Colorado River	None	No	Parcel straddles the Sublette Cutoff (NHT). Much of the parcel is within the 3 mile view shed of the NHT.	5	No	Yes	Lek	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Mountain Plover; Idaho pocket gopher; White-tailed prairie dog; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-193	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Figure Four	Moderate density with sagebrush communities	None	Colorado River	None	No	Parcel straddles the Sublette Cutoff (NHT)	5	No	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Idaho pocket gopher; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-194	Rock Springs	No	4	Yes	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Eighteen Mile, Figure Four	Moderate density with sagebrush communities	None	Colorado River	None	No	All of sections 15, 17, 19, and part of section 30 are within the 3 mile view shed of the Sublette Cutoff.	5	No	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; White-Faced Ibis; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-195	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Eighteen Mile	Moderate density with sagebrush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-196	Rock Springs	Yes	3	Yes	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Cedar Mountain	Moderate density with primarily sagebrush/ sagebrush steppe and some riparian communities	None	Colorado River	Special Status Plants ACEC	Yes	The historic Fort Bridger to Browns Park road exists within this parcel. The road is currently unevaluated as to its NRHP eligibility.	5	No	No	No	No	Colorado river fishes, White-faced ibis, White-tailed prairie dog, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No
-197	Rock Springs	Yes	3,4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Point	Moderate density with primarily sagebrush/ sagebrush steppe and some riparian communities	None	Colorado River	None	Yes	None	5	No	Yes	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-198	Rock Springs	Yes	4	Yes	Interstate Canal, Birch Creek	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Outside any grazing allotment	Moderate density with primarily sagebrush/ sagebrush steppe and some riparian communities	None	Colorado River	None	Yes	None	5	No	No	No	No	Colorado river fishes, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Yes	No	No
-199	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with primarily sagebrush/ sagebrush steppe	None	Colorado River	Special Status Plants ACEC	No	None	5	No	No	No	No	Colorado river fishes, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-200	Rock Springs	No	3,4	Yes	Henry's Fork	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent saltbush and sagebrush communities	None	Colorado River	Special Status Plants ACEC	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	CRCT	CWR	Not Identified	No	No
-201	Rock Springs	No	3,4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent saltbush and sagebrush communities	None	Colorado River	Special Status Plants ACEC	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-202	Rock Springs	No	3,4	Yes	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Cedar Mountain	Moderate density with intermittent saltbush and sagebrush communities	None	Colorado River	Special Status Plants ACEC	No	None	5	No	No	No	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	CWR	Not Identified	No	No
-203	Kemmerer	NO	4	NO	NO	NONE	Dune Land - Typic Torripsamments; mixed; frigid - Typic Torriorthents; coarse - loamy; mixed (calcareous); shallow; Ustic Haplargids; fine-loamy and coarse-loamy; mixed; frigid - Ustic Haplocambid; sandy mixed; frigid	6-8"	Granger Lease	Desert Shrub; Greasewood Fans and Flats; Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	Five known prehistoric cultural sites, three of which are eligible NRHP	Yes	Yes	Yes	Lek	Yes	ferruginous hawk, white-tailed prairie dog, black-footed ferret, pygmy rabbit, Colorado River fish species	No	No	Yes	No	Yes
-204	Kemmerer	NO	4	NO	NO	NONE	Ustic Haplargids; fine-loamy and coarse-loamy; mixed; frigid - Ustic Haplocambid; sandy mixed; frigid	6-8"	Granger Lease	Desert Shrub; Greasewood Fans and Flats;	NO	Colorado River	None	YES	None Identified	Yes	Yes	No	No	No	white-tailed prairie dog, black-footed ferret, pygmy rabbit, Colorado River fish species	No	No	No	No	Yes
-205	Kemmerer	NO	3	NO	NO	NONE	Ustic Haplargids; fine-loamy and coarse-loamy; mixed; frigid - Ustic Haplocambid; sandy mixed; frigid	6-8"	Slate Creek	Wyoming big sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	Six prehistoric cultural sites, five are not NRHP eligible and one that is unevaluated	Yes	No	Yes	Lek	Yes	black-footed ferret, pygmy rabbit, Beaver Rim phlox, Colorado River fish species	No	No	Yes	No	Yes
-206	Kemmerer	NO	4	NO	NO	NONE	Dune Land - Typic Torripsamments; mixed; frigid - Typic Torriorthents; coarse - loamy; mixed (calcareous); shallow; Ustic Haplargids; fine-loamy and coarse-loamy; mixed; frigid - Ustic Haplocambid; sandy mixed; frigid	6-8"	Granger Lease	Desert Shrub; Greasewood Fans and Flats; Wyoming Big Sagebrush;	NO	Colorado River	None	YES	One known prehistoric site that is unevaluated for NRHP eligibility	Yes	No	No	None	No	ferruginous hawk, white-tailed prairie dog, black-footed ferret, pygmy rabbit, Colorado River fish species	No	No	Yes	No	Yes
-207	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Eighteen Mile	Moderate density with fairly contiguous sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	Yes	No	Yes	Colorado river fishes, Pygmy Rabbit, Long-Billed Curlew; Idaho pocket gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-208	Rock Springs	No	4	No	No	No	Shallow to deep, well to excessively drained sandy and loamy soils formed on nearly level to steep uplands. Some soils in this unit are strongly alkaline. Elevation ranges from 6000 to 7000 ft.	7 to 9	Figure Four, Eighteen Mile	Moderate density with fairly contiguous sagebrush communities	None	Colorado River	None	No	The part of the parcel in section 12 straddles the Sublette Cutoff (NHT) and other parts (sections 11,12,13,23,24) lie within the 3 mile view shed.	5	No	No	No	No	Colorado river fishes, Pygmy Rabbit; Long-Billed Curlew; Idaho pocket gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-209	Rock Springs	No	4	No	No	No	Rock outcrop and shallow, well drained soils formed on steep ridges, escarpments, and mountain slopes. Included in this unit are some areas of badlands. Elevation ranges from 6000 to 8000 ft.	8 to 14	Eighteen Mile	Moderate density with fairly contiguous sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	No	No	No	Colorado river fishes, Pygmy Rabbit; Idaho pocket gopher; Mountain Plover; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	Yes	No
-210	Rock Springs	No	4	No	No	No	Rock outcrop and shallow, well drained soils formed on steep ridges, escarpments, and mountain slopes. Included in this unit are some areas of badlands. Elevation ranges from 6000 to 8000 ft.	8 to 14	Eighteen Mile	Moderate density with fairly contiguous sagebrush and saltbush communities	None	Colorado River	None	No	None	5	No	Yes	No	No	Colorado river fishes, Pygmy Rabbit; Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	No
-211	Kemmerer	NO	2,3,4	YES	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torriorthents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torriorthents; siliceous; frigid	6-8"	Christensen, Lyman Cattle	Basin exposed rock/soil; Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	12 known prehistoric cultural sites, one of which is NRHP eligible, five that are not eligible, and six that are unevaluated for eligibility	Yes	Yes	Yes	None	No	ferruginous hawk, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Colorado River fish species	No	CWR	Yes	No	Yes
-212	Kemmerer	NO	3 & 4	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid	8-10"	Lyman Cattle	Basin exposed rock/soil; Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub	NO	Colorado River	None	YES	None Identified	Yes	Yes	Yes	Lek	No	black-footed ferret, Idaho pocket gopher, pygmy rabbit, Colorado River fish species	No	CWR	Yes	No	Yes
212	Rock Springs	No	4	No	No	No	Moderately deep to very shallow, well drained soils formed on rolling upland plains dissected by rock ravines, short escarpments, and draws. Elevation ranges from 6100 to 6700 ft.	7 to 9	Sage Creek Mountain	Moderate density, sagebrush and sagebrush steppe	None	Colorado River	None	No	None	5	Yes	Yes	Lek	No	Colorado river fishes, White-faced ibis, Pygmy rabbit, Sage Thrasher, Sage Sparrow, Brewer's Sparrow, loggerhead shrike	None	None	Not Identified	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-213	Kemmerer	NO	3	NO	NO	NONE	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torriorthents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torripsammets; siliceous; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torriorthents; loamy-skeletal; mixed; frigid	6-8"	Indian Flat	Basin exposed rock/soil; Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub	NO	Colorado River	None	YES	29 prehistoric sites, six are not NRHP eligible and 23 that are unevaluated for eligibility; two non-eligible prehistoric sites with historic debris; one non-eligible historic debris area	Yes	No	No	None	No	mountain plover, white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	CWR	Yes	No	Yes
-214	Kemmerer	NO	3	YES	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torriorthents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torripsammets; siliceous; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torriorthents; loamy-skeletal; mixed; frigid	6-8"	Indian Flat, Lyman Cattle,	Basin exposed rock/soil; Wyoming Big Sagebrush; Mixed Grass Prairie; Irrigated crops; Desert Shrub	NO	Colorado River	None	YES	24 prehistoric sites, two are NRHP eligible, three are not eligible, 19 that are unevaluated for eligibility; three historic debris localities of which two are not eligible and one is unevaluated for eligibility	Yes	No	Yes	None	No	black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	CWR	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-215	Kemmerer	NO	3 & 4	YES	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torriorthents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torriorthents; siliceous; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torriorthents; loamy-skeletal; mixed; frigid	6-8"	Indian Flat, Lyman Cattle, Christensen	Basin exposed rock/soil; Wyoming Big Sagebrush; Mixed Grass Prairie; Irrigated crops	NO	Colorado River	None	YES	22 prehistoric sites, one is NRHP eligible, five that are not eligible, 16 are unevaluated for eligibility; two prehistoric sites with historic debris that are unevaluated for eligibility	Yes	Yes	Yes	None	No	white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Colorado River fish species	No	CWR	Yes	No	Yes
-216	Kemmerer	NO	4	NO	NO	NONE	Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid; Typic Torriorthents; siliceous; frigid	6-8"	Slate Creek	Desert Shrub; Wyoming big sagebrush	NO	Colorado River	None	NO	Three known prehistoric cultural sites that are not NRHP eligible.	Yes	No	Yes	None	No	black-footed ferret, Idaho pocket gopher, pygmy rabbit, large-fruited bladderpod, Colorado River fish species	No	CWR	BO	No	Yes
-217	Kemmerer	NO	2 & 3	NO	NO	YES	Typic Haplocryalls; loamy-skeletal; mixed - Typical Dystrocryepts; loamy-skeletal; mixed - Typic Argicryolls; loamy-skeletal; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torriorthents; loamy-skeletal; mixed; frigid	10-20"	Sage Creek	Basin exposed rock/soil; Mountain Big Sage; Spruce Fir. Mesic Upland Shrub; Aspen Forest; Juniper Woodland	NO	Colorado River	None	YES	Two known prehistoric cultural sites that are NRHP eligible	Yes	Yes	Yes	None	Yes	ferruginous hawk, Canada lynx, Idaho pocket gopher, pygmy rabbit, prostrate bladderpod, Uinta greenthread, Colorado River fish species	No	CWR & Parturition	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-218	Kemmerer	NO	2 & 3	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torripsamments; siliceous; frigid	6-8"	Lyman Cattle, Poverty Flat, Little Dry Creek	Basin exposed rock/soil; Wyoming Big Sagebrush; Forest-Dominated Riparian; Irrigated crops	NO	Colorado River	None	YES	None Identified	Yes	No	No	None	No	Idaho pocket gopher, pygmy rabbit, Colorado River fish species	No	CWR	No	No	None Identified
-219	Kemmerer	YES	2 & 3	YES	Black's Fork River, Smith's Fork River, Cottonwood Creek	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	South Monument Highway, Indian Flat, Lyman Cattle, Christensen	Basin exposed rock/soil; Wyoming Big Sagebrush; Forest-Dominated Riparian; Irrigated crops; Shrub-Dominated Riparian; Mixed Grass Prairie; Greasewood Fan and Flats	NO	Colorado River	None	YES	Class 3 segment of the Oregon-California National Historic, non-contributing segment of the historic Lincoln Highway/Old US 30S; three prehistoric sites, one of which is NRHP; two prehistoric sites with historic debris that are not eligible; one historic debris locality that is not eligible; and one historic irrigation ditch that is not eligible	Yes	No	No	None	Yes	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	CWR	No	No	Yes
-220	Kemmerer	NO	3	NO	NO	NONE	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid	12-16"	Sage Creek	Mixed Grass Prairie; Wyoming Big Sagebrush	NO	Colorado River	None	YES	None Identified	Yes	Yes	Yes	Lek	Yes	Idaho pocket gopher, Colorado River fish species	No	No	No	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-221	Kemmerer	YES	2 & 3	YES	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typical Cryofluvents; sandy-skeletal; mixed; frigid; - Histic Cryaquepts; fine-loamy; over sandy or sandy-skeletal; mixed; frigid; Typic Haplocryalls; loamy-skeletal; mixed - Typical Dystrocrypts; loamy-skeletal; mixed - Typic Argicryolls; loamy-skeletal; mixed; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Hamplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid;	12-18"	Smith's Fork, Murray Reservoir, Rock Springs, Dry Creek Bench, Sage Creek Bench	Grass-Dominated Wetland; Irrigated Crops; Spruce Fir; Shrub-Dominated Riparian; Mountain Big Sagebrush; Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	One known historic irrigation facility, the Murray Ditch that is not NRHP eligible.	Yes	Yes	Yes	Lek	Yes	Idaho pocket gopher, Colorado River fish species	No	No	No	No	Yes
-222	Kemmerer	YES	2 & 3	YES	NO	YES	Typical Cryofluvents; sandy-skeletal; mixed; frigid; - Histic Cryaquepts; fine-loamy; over sandy or sandy-skeletal; mixed; frigid; Typic Haplocryalls; loamy-skeletal; mixed - Typical Dystrocrypts; loamy-skeletal; mixed - Typic Argicryolls; loamy-skeletal; mixed; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid	14-18"	Murray Reservoir Bench	Grass-Dominated Wetland; Irrigated Crops; Spruce Fir; Mountain Big Sagebrush; Wyoming Big Sagebrush; Mixed Grass Prairie; Aspen Forest	NO	Colorado River	None	YES	One known historic irrigation facility, the Murray Ditch that is not NRHP eligible.	Yes	Yes	Yes	None	Yes	Canada lynx, Idaho pocket gopher, Colorado River fish species	No	Parturition	No	No	Yes
-223	Kemmerer	YES	2 & 3	YES	NO	YES	Typic Haplocryalls; loamy-skeletal; mixed - Typical Dystrocrypts; loamy-skeletal; mixed - Typic Argicryolls; loamy-skeletal; mixed	16-20"	Graham Reservoir, Timber Place, Sage Creek	Aspen Forest; Lodgepole Pine; Grass-Dominated Wetland; Mountain Big Sagebrush; Spruce Fir	NO	Colorado River	None	YES	None Identified	Yes	Yes	No	None	No	Canada lynx, Idaho pocket gopher, Colorado River fish species	No	CWR & Parturition	No	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-224	Kemmerer	YES	2 & 3	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifluents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Typic Torripsamments; saliceous; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifluents; loamy-skeletal; mixed; frigid	8-10"	Upper Flat, Tipperary, Gourley, Sidehill, Fourty, Little Dry Creek	Basin exposed rock/soil; Wyoming Big Sagebrush; Forest-Dominated Riparian; Irrigated crops	NO	Colorado River	None	YES	Two prehistoric sites, one of which is NRHP eligible; the historic Millich Irrigation Ditch that is not eligible.	Yes	No	No	None	Yes	Idaho pocket gopher, Colorado River fish species	No	CWR	No	No	None Identified
-225	Kemmerer	YES	2 & 3	NO	Little Dry Creek	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifluents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifluents; loamy-skeletal; mixed; frigid	8-14"	Coyote Hollow, Smith' Fork, Lower Bench, West Lower bench, Sage Creek, Leavitt Bench, Sidehill, Johnson, Gourley	Basin exposed rock/soil; Wyoming Big Sagebrush; Mountain Big Sagebrush; Forest-Dominated Riparian; Shrub-Dominated Riparian; Mixed Grass Prairie; Irrigated crops	NO	Colorado River	None	YES	One known historic irrigation facility, the Botero Ditch that is not eligible.	Yes	Yes	Yes	Lek	Yes	Idaho pocket gopher, pygmy rabbit, prostrate bladderpod, Colorado River fish species	No	CWR	No	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-226	Kemmerer	YES	2& 3	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifluents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifluents; loamy-skeletal; mixed; frigid	10-14"	Dry Creek Bench, Leavitt Bench, West Lower Bench, Sage Creek, Gourley	Basin exposed rock/soil; Wyoming Big Sagebrush; Irrigated crops; Mixed Grass Prairie; Shrub-Dominated Riparian;	NO	Colorado River	None	YES	One known historic irrigation facility, the Botero Ditch that is not eligible	Yes	Yes	Yes	None	Yes	Idaho pocket gopher, pygmy rabbit, prostrate bladderpod, Colorado River fish species	No	No	No	No	Yes
-227	Kemmerer	YES	2& 3	NO	Leviatt Creek	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifluents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifluents; loamy-skeletal; mixed; frigid	10-14"	Sage Creek, Lower Bench, Johnson	Basin exposed rock/soil; Wyoming Big Sagebrush; Mountain Big Sagebrush; Irrigated crops; Shrub-Dominated Riparian; Mixed Grass Prairie	NO	Colorado River	None	YES	One known historic irrigation facility, the Milch Ditch that is not eligible	Yes	Yes	Yes	Lek	Yes	Idaho pocket gopher, pygmy rabbit, prostrate bladderpod, Colorado River fish species	No	No	No	No	Yes
-228	Kemmerer	YES	2& 3	NO	Jack Hollow Creek	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifluents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifluents; loamy-skeletal; mixed; frigid	6-10"	Crowfoot, Upper Flat	Basin exposed rock/soil; Wyoming Big Sagebrush; Forest-Dominated Riparian; Irrigated crops	NO	Colorado River	None	YES	One known historic irrigation facility, the Kidman-Wall Canal that is not eligible	Yes	No	No	None	Yes	Idaho pocket gopher, white-faced ibis, long-billed curlew, northern leopard frog, Colorado River fish species	No	CWR	No	No	Yes

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Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-229	Kemmerer	NO	3	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-10"	Bridger Airport, Hannblin, Oaks	Wyoming Big Sagebrush; Irrigated Crops; Desert Shrub; Juniper Woodland; Aspen Forest; Mixed Grass Prairie	NO	Colorado River	Within 10,000' of the Bridger Airport Runway	YES	Class 2 segment of the Oregon-California National Historic Trail; two historic roads, one of which is NRHP eligible; two non-eligible historic irrigation ditches; eight prehistoric sites, five are NRHP eligible, two are not eligible, and one is unevaluated for eligibility and is tribally sensitive to Native Americans; one eligible prehistoric site with historic debris; and one non-eligible historic debris locality	Yes	No	Yes	Lek	No	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	No	No	No	Yes
-230	Kemmerer	YES	2& 3	NO	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrissamments; saliceous; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-10"	Bridger Airport	Wyoming Big Sagebrush; Irrigated Crops; Desert Shrub; Forest-Dominated Riparian; Aspen Forest	NO	Colorado River	Within 10,000' of the Bridger Airport Runway	YES	Class 3 segment of the Oregon-California National Historic ; one historic road that is NRHP eligible, two non-eligible historic irrigation ditches; an eligible historic homestead; 12 prehistoric sites, two are NRHP eligible, five are not eligible and five are unevaluated	Yes	No	Yes	None	No	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	No	Yes	No	None Identified
-231	Kemmerer	YES	2& 3	NO	NO	NONE	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-10"	Bridger Airport, Fort Bridger, Wall Reservoir	Wyoming Big Sagebrush; Irrigated Crops; Desert Shrub; Forest-Dominated Riparian	NO	Colorado River	None	YES	Class 3 segment of the Oregon-California National Historic Trail; a non-contributing segment of the historic Lincoln Highway/Old US30; one historic road that is NRHP eligible; three non-eligible historic irrigation ditches; three non-eligible prehistoric sites; two non-eligible historic debris localities	Yes	No	Yes	None	No	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	CWR	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-232	Kemmerer	NO	4	YES	NO	NONE	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid	6-8"	Carter Lease, Austin Triangle	Shrub-Dominated Riparian; Juniper Woodland; Wyoming Big Sagebrush; Desert Shrub	NO	Colorado River	None	YES	two prehistoric sites, one is not eligible and the other is unevaluated for eligibility; a non-contributing active segment of the historic Union Pacific Railroad	Yes	Yes	Yes	None	No	white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Colorado River fish species	No	CWR	No	No	None Identified
-233	Kemmerer	NO	4	NO	NO	NONE	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	Carter Lease	Desert Shrub; Wyoming big Sagebrush	NO	Colorado River	None	YES	Carter to Opal Road	Yes	Yes	No	None	No	white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	No	No	No	Yes
-234	Kemmerer	NO	2& 3	NO	NO	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Rock Outcrop and Typic Torriorthents; loamy-skeletal; frigid; Typic Torrissamments; saliceous; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	Carter Lease	Desert Shrub; Wyoming big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	Class 1 segment of the Oregon-California National Historic; Carter to Opal Road; an unevaluated prehistoric site	Yes	No	No	None	No	mountain plover, white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	No	No	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-235	Kemmerer	NO	4	YES	NO	YES	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	Carter Lease, Austin Triangle, Muddy Creek, Bridger Airport CARTER LEASE; AUSTIN TRIANGLE; MUDDY CREEK; BRIDGER AIRPORT	Desert Shrub; Wyoming big Sagebrush; Mixed Grass Prairie; Shrub-Dominated Riparian; Juniper Woodland	NO	Colorado River	None	YES	Oregon-California National Historic Trail; three historic roads, one is NRHP eligible; a non-contributing active segment of the historic Union Pacific Railroad; historic railroad town of Carter; six prehistoric sites, one of which is NRHP eligible	Yes	No	Yes	None	No	mountain plover, white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes
-236	Kemmerer	NO	3 & 4	YES	NO	YES	Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	Austin Triangle, Muddy Creek, Bridger Airport	Desert Shrub; Wyoming big Sagebrush; Mixed Grass Prairie; Shrub-Dominated Riparian; Juniper Woodland; Aspen Forest	NO	Colorado River	Within 10,000' of the Bridger Airport Runway	YES	Two historic roads, one of which is NRHP eligible; 13 prehistoric sites, one of which is NRHP eligible; one historic sheepherder camp that is unevaluated for eligibility	Yes	No	Yes	Lek	Yes	mountain plover, white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, Colorado River fish species	No	CWR	No	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route	
-237	Kemmerer	NO	3 & 4	YES	NO	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Typic Torrifuvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid; Ustic Haplagrids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torrifuvents; loamy-skeletal; mixed; frigid	6-8"	Carter Lease, Bridger Airport	Desert Shrub; Wyoming big Sagebrush; Mixed Grass Prairie; Shrub-Dominated Riparian; Juniper Woodland	NO	Colorado River	None	YES	Oregon-California National Historic Trail; a non-contributing active segment of the historic Union Pacific Railroad	Yes	No	No	None	No	mountain plover, white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes	
-238	Kemmerer	YES	3	NO	Alkali Creek	YES	Humic Dystrocryepts; loamy-skeletal; mixed - Lithic Cryorthents; loamy-skeletal; mixed; - Typic Cryaquepts; fine-loamy over sandy or sandy-skeletal; mixed; Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid	10-12"	Slate Creek, Quealy Peak	Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	Within 10,000' of the Bridger Airport Runway	YES	Class 4 non-contributing segment of the Hams Fork Cutoff of the Oregon-California National Historic Trail that is known to be destroyed so that it is not managed for preservation	NO	No	No	None	No	Idaho pocket gopher, pygmy rabbit, tufted twinpod, Colorado River fish species	No	No	No	No	No	Yes
-239	Kemmerer	YES	3 & 4	NO	Alkali Creek	YES	Humic Dystrocryepts; loamy-skeletal; mixed - Lithic Cryorthents; loamy-skeletal; mixed; - Typic Cryaquepts; fine-loamy over sandy or sandy-skeletal; mixed; Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid	10-12"	Slate Creek, Quealy Peak	Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	Class 4 non-contributing segment of the Hams Fork Cutoff of the Oregon-California National Historic Trail that is known to be destroyed so that it is not managed for preservation; two prehistoric sites with historic debris, one of which is not eligible; a historic debris area that is not eligible	Yes	No	No	None	No	Idaho pocket gopher, pygmy rabbit, Beaver Rim phlox, prostrate bladderpod, Colorado River fish species	No	No	No	No	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-240	Kemmerer	YES	3	YES	Willow Creek	YES	Humic Dystrocrepts; loamy-skeletal; mixed - Lithic Cryorthents; loamy-skeletal; mixed; - Typic Cryaquepts; fine-loamy over sandy or sandy-skeletal; mixed; Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid	10-14"	Pomeroy Basin, East Willow Creek	Wyoming Big Sagebrush; Mixed Grass Prairie; Aspen Forest	NO	Colorado River	None	YES	Three historic coal mines, one of which is NRHP eligible; five historic debris localities, four of which are not eligible and one that is unevaluated; one prehistoric site with historic debris that is not eligible; and two prehistoric sites that are not eligible.	No	No	Yes	Lek	No	Idaho pocket gopher, pygmy rabbit, prostrate bladderpod, tufted twinpod, Colorado River fish species	No	No	Yes	No	Yes
-241	Kemmerer	NO	4	NO	NO	YES	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Rock Outcrop - Typic Torriorthents; loamy-skeletal; mixed; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid	6-10"	Carter Lease	Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub	NO	Colorado River	None	YES	Three prehistoric sites, one of which is not NRHP eligible and the others unevaluated; three prehistoric sites with historic debris, one of which is eligible; two historic sheepherder camps that are not eligible; one historic locality that is not eligible; and one historic road that is not eligible	Yes	No	No	None	Yes	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Beaver Rim phlox, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes
-242	Kemmerer	NO	2,3, & 4	NO	NO	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid	8-10"	Carter Lease	Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub	NO	Colorado River	None	YES	two known prehistoric cultural sites that are not eligible; section 18 is within the area which requires preservation of the view shed setting for the Bridger Antelope Trap	Yes	No	No	None	Yes	mountain plover, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-243	Kemmerer	NO	2,3, & 4	NO	NO	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Typic Torrfluvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid	6-10"	Carter Lease	Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub; Shrub-Dominated Riparian; Juniper Woodland	NO	Colorado River	None	YES	A Class 2 segment of National Historic Trail, a non-contributing active segment of the historic Union Pacific Railroad; one historic railroad bridge which is not eligible; and one eligible prehistoric cultural site; Section 30 is within the area which requires preservation of the view shed setting for the Bridger Antelope Trap	Yes	No	No	None	Yes	white-tailed prairie dog, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes
-244	Kemmerer	NO	2,3, & 4	YES	NO	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Typic Torrfluvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid	6-10"	Carter Lease, Bridger Airport	Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub; Shrub-Dominated Riparian; Juniper Woodland	NO	Colorado River	None	YES	A non-contributing active segment of the historic Union Pacific Railroad; one historic railroad bridge which is not eligible; and one eligible prehistoric cultural site; Section 30 is within the area which requires preservation of the view shed setting for the Bridger Antelope Trap	Yes	No	No	None	Yes	ferruginous hawk, black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes
-245	Kemmerer	NO	2& 4	YES	Muddy Creek	NONE	Aridic Haplustolls; fine-loamy; mixed; frigid; Ustic Haplocambids; fine-loamy; mixed; frigid; Typic Torrfluvents; fine-loamy over sandy-skeletal; mixed; frigid and Fluventic Haploquolls; fine-loamy over sandy or sandy-skeletal; mixed; frigid	6-8"	Bridger Airport	Wyoming Big Sagebrush; Mixed Grass Prairie; Desert Shrub; Shrub-Dominated Riparian; Juniper Woodland	NO	Colorado River	None	YES	Section 32 is within the area which requires preservation of the view shed setting for the Bridger Antelope Trap.	Yes	No	No	None	No	black-footed ferret, Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch, tufted twinpod, Colorado River fish species	No	CWR	Yes	No	Yes
-246	Kemmerer	YES	3	YES	Muddy Creek	YES	Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid	10-16"	Pomeroy Basin, West Willow Creek	Wyoming Big Sagebrush; Mixed Grass Prairie	Yes	Colorado River	None	YES	Seven prehistoric sites, one of which is eligible, four that are not eligible, two that are unevaluated; one unevaluated historic sawmill; one historic timber camp that is not eligible	No	No	Yes	None	No	Idaho pocket gopher, pygmy rabbit, Beaver Rim phlox, prostrate bladderpod, tufted twinpod, Colorado River fish species	No	No	Yes	No	Yes

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Plate/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-247	Kemmerer	YES	2	YES	Roney Creek, Coal Branch Creek	YES	Humic Dystricrypts; loamy-skeletal; mixed - Lithic Cryorthents; loamy-skeletal; mixed; - Typic Cryaquepts; fine-loamy over sandy or sandy-skeletal; mixed; Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Hamplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid	16-28"	Mammoth Hollow	Aspen Forest; Spruce Fir; Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	None Identified	No	No	Yes	None	No	Canada lynx, Idaho pocket gopher, Trelease's milkvetch, Colorado River fish species	CRCT Potential (Roney Creek)	No	No	No	Yes
-248	Kemmerer	YES	2	YES	West Willow Creek, Everly Creek, Roney Creek, Sheep Dip Creek	YES	Humic Dystricrypts; loamy-skeletal; mixed - Lithic Cryorthents; loamy-skeletal; mixed; - Typic Cryaquepts; fine-loamy over sandy or sandy-skeletal; mixed; Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid	14-28"	Commissary, Mammoth Hollow	Aspen Forest; Spruce Fir; Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Colorado River	None	YES	Class 1 segment of the Dempsey-Hockaday National Historic; one non-eligible prehistoric site	No	No	Yes	None	No	Canada lynx, Idaho pocket gopher, Trelease's milkvetch, Colorado River fish species	CRCT Potential (Roney Creek)	No	No	No	Yes
-249	Kemmerer	YES	4	NO	NO	NONE	Rock Outcrop and Lithic Torriorthents; loamy-skeletal; frigid; Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Hamplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid	12-14"	None	Wyoming Big Sagebrush; Mixed Grass Prairie	NO	Bear River	Adjacent to the Cokeville Meadows National Wildlife Refuge	YES	None Identified	No	No	Yes	Lek	Yes	Idaho pocket gopher, pygmy rabbit	No	No	No	No	None Identified
-250	Kemmerer	NO	3	NO	NO	YES	Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Hamplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid	10-12"	Leefe	Wyoming Big Sagebrush; Greasewood Fans and Flats; Mixed Grass Prairie	NO	Bear River	None	YES	None Identified	No	No	No	None	No	Idaho pocket gopher, pygmy rabbit, Beaver Rim phlox	No	CWR	No	No	None Identified

Table 3-2 Affected Environment

Parcel # WY-1205	Field Office	Split Estate	VRM Class	Riparian Areas	Perennial Streams	Slopes Greater than 25%	Soils	Precip. Zone (inches)	Grazing Allotment	Vegetation	Sodium/ Coal Leasing Area	Major Watershed (Platte/ Colorado/Great Divide Basin/Bear)	Special Management Areas	Potential for Dwellings	Cultural Sites/ NHT	Paleo. PFYC Class 4 or 5 (Yes/ No)	Sage-grouse Core Area (Yes/ No)	Sage-grouse/ Sharp-tailed grouse Nesting Habitat (Yes/No)	Sage-grouse Leks/Sharp-tailed Dancing Ground	Sage-grouse/Sharp-tailed grouse winter concentration areas (Yes/No)	Other Special Status Species (T&E, Candidate, Sensitive Species)	Colorado or Bonneville Cutthroat Trout (CRCT/ BCT)	Big Game Crucial Winter Range (CWR)/ Parturition	Burrowing owl (BO)/ Raptor Nesting	Bald Eagle Roost	Big Game Migration Route
-251	Kemmerer	YES	4	NO	Rabbit Creek	NONE	Ustic Haplargids; fine-loamy; mixed; frigid; Ustic Haplocambids; - fine-loamy; mixed; frigid; Typic Natrargids; fine-loamy; mixed; frigid; Ustic Haplocambids; coarse-loamy; mixed; frigid - Ustic Torriorthents; coarse-loamy; mixed frigid - Typic Torriorthents; loamy-skeletal; mixed; frigid	10-12"	None	Wyoming Big Sagebrush; Shrub-Dominated Riparian; Irrigated Crops; Mixed Grass Prairie	NO	Bear River	None	YES	None Identified	No	No	No	None	No	Idaho pocket gopher, pygmy rabbit, Trelease's milkvetch	No	No	No	No	None Identified
-252	Rawlins	No	2	Yes	North Platte River	No	mid-elevation upland soils that are moderate to deep, with a depth to bedrock of greater than 20 inches occurring in areas, can have a thick organic based surface horizon, moderately productive and are generally stable but do have areas with moderate or greater erosion potential.	10 to 14	North Walcott	sagebrush dominated shrublands with a variety of forbs and grasses.	NO	Platte River	None	yes	None Identified	No	yes	yes	None	yes	Platte River fishes, Wyoming pocket gopher, mountain plover, ferruginous hawk, Persistent sepal yellowcress, potential habitat for sensitive reptilian & amphibian species	No	no	yes	yes	None Identified

3.2.2 Resources Common to all of the Parcels

3.2.2.1 Air Resources:

In addition to the air quality information in the RMPs cited above, new information about greenhouse gases (GHGs) and their effects on national and global climate conditions has emerged since the RMPs were prepared. Ongoing scientific research has identified the potential impacts of GHG emissions such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor, and several trace gasses on global climate. Through complex interactions on a global scale, GHG emissions cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon sources have caused GHG concentrations to increase measurably, and may contribute to overall climatic changes, typically referred to as global warming.

This EA incorporates an analysis of the contributions of the proposed action to GHG emissions and a general discussion of potential impacts to climate.

Air quality, climate, and visibility are the components of air resources which include applications, activities, and management of the air resource. BLM must consider and analyze the potential effects of authorized activities on air resources as part of the planning and decision making process. The Kemmerer, Rawlins, and Green River RMP's all address air quality issues, impacts, and potential mitigation. It is important to reiterate the offering and issuing leases is an administrative action, and the offering and the issuing of leases, in and of themselves, does not create air quality impacts.

3.2.2.1.1 Air Quality

Regional air quality is influenced by the interaction of meteorology, climate, the magnitude and spatial distribution of local and regional air pollutant sources, and the chemical properties of emitted air pollutants. The following sections summarize the existing climate and air quality within the area potentially affected by the parcels under consideration for leasing.

A variety of pollutants can affect air quality; these pollutants and their effects on health, visibility, and ecology are described in the following sections, along with data on existing air quality conditions found within the Kemmerer, Rawlins, and Rock Springs Field Office areas.

Monitoring and enforcement air quality standards are administered by the Wyoming Department of Environmental Quality-Air Quality Division (WDEQ-AQD). Wyoming Ambient Air Quality Standards (WAAQS) and National Ambient Air Quality Standards (NAAQS) identify maximum limits for concentrations of criteria air pollutants at all locations to which the public has access. The WAAQS and NAAQS are legally enforceable standards. Concentrations above the WAAQS and NAAQS represent a risk to human health that, by law, require public safeguards be implemented. State standards must be at least as protective of human health as federal standards, and may be more restrictive than federal standards, as allowed by the Clean Air Act (CAA). Currently, the WDEQ-AQD does not have regulations regarding greenhouse gas emissions, although these emissions are regulated indirectly by various other regulations.

Concentrations:

Pollutant concentration can be defined as the mass of pollutant present in a volume of air and is reported in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), parts per million (ppm), or parts per billion (ppb). The State of Wyoming has used monitoring and modeling to determine that the Rock Springs, Rawlins and Kemmerer Field Office areas are currently in compliance with Wyoming and federal concentration standards; whereas the Pinedale Field Office has experienced exceedances of the ozone standard. In addition, non-reference method monitoring systems are operational, including the *Clean Air Status and Trends Network (CASTNet)* and *Wyoming Air Resources Monitoring System (WARMS)*. Data from these systems have been determined to be representative of the area. There are two monitoring sites within the Kemmerer Field Office; four within the Pinedale FO; two in the Rock Springs FO; and two in the Rawlins FO.

Criteria air pollutants are those for which national concentration standards have been established; pollutant concentrations greater than the established standards represent a risk to human health or welfare. Table 3.2.1.1 presents background concentrations of criteria air pollutants as determined by the WDEQ-AQD.

Background concentrations are in compliance with applicable Wyoming and national ambient air quality standards (WAAQS/NAAQS). Also included in Table 3.2.1.1 are Prevention of Significant Deterioration (PSD) increments for Class I areas (wilderness areas with protected air quality status due to their pristine condition) and Class II areas (wilderness areas with protected air quality status due to their sensitive condition). All NEPA analysis comparisons to the PSD increments are intended to evaluate a threshold of concern and do not represent a regulatory PSD Increment Consumption Analysis. NAAQS/WAAQS have been established for the following criteria pollutants:

Carbon monoxide (CO) is an odorless, colorless gas formed during combustion of any carbon-based fuel, such as during operation of engines, fireplaces, furnaces, etc. Because carbon monoxide data are generally collected only in urban areas where automobile traffic levels are high, recent data are often unavailable for rural areas. Background carbon monoxide data were collected in Ryckman Creek (BLM 1983) in southwest Wyoming and in Rifle and Mack, Colorado during the late 1970s and the early 1980s. These are the most representative available data for the Project Area. Background carbon monoxide concentrations were 5.6–14% of the applicable WAAQS (Table 3.2.1.1)

Nitrogen dioxide (NO₂) is a highly reactive compound formed at high temperatures during operation of fossil fuel combustion. At high concentrations, it can form a red-brown gas. At concentrations in excess of the EPA air quality standard, it is a respiratory irritant; however, all areas of the United States are in compliance with this air quality standard. During fossil fuel combustion, NO is released into the air which reacts in the atmosphere to form NO₂. NO plus NO₂ is a mixture of nitrogen gases, collectively called nitrogen oxides (NO_x). NO_x emissions can convert to ammonium nitrate particles and nitric acid which can cause visibility impairment and atmospheric deposition. Nitrogen dioxide can contribute to “brown cloud” conditions and ozone formation, and can convert to ammonium (NH₄), nitrate particles (NO₃), and nitric acid (HNO₃). Internal combustion engines are one source of NO_x. However, coal fired power plants often have the highest NO_x emissions although any combustion source will produce NO_x. Figure 3.1 shows mean annual concentrations of nitrogen compounds at the Pinedale CASTNet site from 1989 through 2004. Nitrogen dioxide data were collected in Green River, Wyoming, from

January 2001 to December 2001. Background concentrations of nitrogen dioxide were 3.4% of the applicable WAAQS (Table 3.2.1.1).

Ozone (O₃) is a faint blue gas that is generally not emitted directly into the atmosphere but is formed in the atmosphere from complex photochemical reactions involving NO₂ and volatile reactive organic compounds (VOC). Sources of VOCs include automotive emissions, paint, varnish, oil and gas operations and some types of vegetation. The faint acrid smell common after thunderstorms is caused by ozone formation by lightning. O₃ is a strong oxidizing chemical that can burn lungs and eyes, and damage plants. Ozone is a severe respiratory irritant at concentrations in excess of the federal standards. On January 6, 2010, EPA proposed that the primary ozone standard be set between 0.060 and 0.070 ppm. Sublette County has experienced exceedances of the current ozone standard on different occasions over past 4 years, which has resulted in the Governor of Wyoming nominating Sublette County as a non-attainment area.

Table 3.2.1.1: Air Pollutant Background Concentrations, NAAQS/WAAQS and Prevention of Significant Deterioration (PSD) Increments (µg/m³).					
Pollutant/Averaging Time	Background Concentration (µg/m³)	NAAQS and WAAQS (µg/m³)	Percent of NAAQS and WAAQS	Incremental Increase Above Legal Baseline^a	
				PSD Class I	PSD Class II
CO					
1-hour	3,336 [†] 2,229 ^{††}	40,000	8.3% [†] 5.6% ^{††}	n/a	n/a
8-hour	1,381 [†] 1,148 ^{††}	10,000	13.8% [†] 11.5% ^{††}	n/a	n/a
NO₂[‡]					
Annual	3.4	100	3.4%	2.5	25
(O₃)[€]					
8-hour	147	157	93.6%		
PM₁₀ⁱ					
24-hour	48	150	32.0%	8	30
Annual	25	50-WAAQS	50.0%	4	17
PM_{2.5}ⁱ					
24-hour	15	35-NAAQS 65-WAAQS	42.9% 23.1%	n/a	n/a
Annual	7.8	15	52.0%	n/a	n/a
(SO₂)ⁱⁱ					
3-hour	29	1,300	2.2%	25	512
24-hour (National)	43	365	11.8%	5	91
24-hour (Wyoming)	18	260	6.9%	5	91
Annual (National)	9	80	11.3%	2	20
Annual (Wyoming)	5	60	8.3%	2	20

n/a = not applicable, PSD = prevention of significant deterioration.

a All NEPA analysis comparisons to the PSD increments are indented to evaluate a threshold of concern and do not represent a regulatory PSD Increment Consumption Analysis.

† Background data collected by Amoco at Ryckman Creek for an 8-month period during 1978–1979, summarized for the Riley Ridge Project (BLM 1983)

†† Background data collected at Rifle and Mack, Colorado in conjunction with proposed oil shale development during the early 1980's.

‡ Background data collected at Green River Basin Visibility Study site, Green River, Wyoming, during the period January–December 2001 (Air Resource Specialists 2002).

€ Background data collected at Green River Basin Visibility Study site, Green River, Wyoming, during the period June 10, 1998, through December 31, 2001 (Air Resource Specialists 2002).

l Background data for PM10 collected by Wyoming Department of Environmental Quality/Air Quality Division (WDEQ/AQD) at Rock Springs, Wyoming, in 2005. PM2.5 based on a 1:3.2 PM2.5:PM10 ratio based on three full years of PM10 data (1997-1999) collected in Rock Springs as part of the Green River Basin Visibility Study. These data have been determined by WDEQ/AQD to be the most representative data available.

ii Background data for Wyoming (3 hour, 24 hour and annual) collected at the Craig Power Plant site and oil shale areas 1980-1984

Figure 3.2.1.1: Mean Annual Concentrations of Nitrogen Compounds near Pinedale, Wyoming. Concentrations typical in remote areas are: $\text{HNO}_3 = 0.3$ ppb, $\text{NO}_3 = 0.2$ ppb, $\text{NH}_4 = 0.3$ ppb. Data taken from CASTNET Pinedale Station PND165.

In March 2008 the U.S. Environmental Protection Agency (EPA) promulgated the current National Ambient Air Quality Standard (NAAQS) for ozone. The ozone standard was lowered from 0.08 parts per million (ppm) to 0.075 ppm based on the fourth highest 8-hour average value per year at a site, averaged over three years. Based on monitoring results from 2006 through 2008, the entire state of Wyoming is in compliance with this standard except for at a single monitor, the Boulder monitor, in Sublette County. The WDEQ-AQD evaluated whether a nonattainment area should be designated due to the monitored results at the Boulder monitor. The WDEQ-AQD recommended that the Upper Green River Basin (UGRB) be designated as nonattainment for the 2008 ozone National Ambient Air Quality Standard (NAAQS). The WDEQ-AQD based this recommendation on a careful review of the circumstances surrounding the incidence of elevated ozone events. Elevated ozone in the UGRB is associated with distinct meteorological conditions. These conditions have occurred in February and March in some (but not all) of the years since monitoring stations began operation in the UGRB in 2005. The UGRB does not include any lands within the Rawlins or Kemmerer Field Offices, but does include a portion of the Rock Springs Field Office and most of the Pinedale Field Office.

Ozone data were collected in Green River, Wyoming, from 1998 to 2001 and show background concentrations of ozone to be 93.6% of the applicable WAAQS (Table 3.2.1.1). Additional ozone monitoring at the Pinedale CASTNet site shows that concentrations of ozone there are typical of remote areas.

Particulate matter (PM) refers to the small particles (i.e., soil particles, pollen, etc.) suspended in the air that settle to the ground slowly and may be re-suspended if disturbed. Ambient air particulate matter standards are based on the size of the particle. The two types of particulate matter are:

- PM₁₀ (particles with diameters less than 10 micrometers): small enough to be inhaled and capable of causing adverse health effects.
- PM_{2.5} (particles with diameters less than 2.5 micrometers): small enough to be drawn deeply into the lungs and cause serious health problems. These particles are also the main cause of visibility impairment.

Background concentrations of PM₁₀ are 32-50% of the applicable WAAQS (Table 3.2.1.1). Other regulatory monitoring of particulate matter showed that concentrations were in compliance with applicable WAAQS.

The WDEQ-AQD monitors particulate matter throughout the State of Wyoming with the State and Local Air Monitoring System (SLAMS). Table 3.2.1.2 summarizes particulate matter concentrations in Wyoming during 2001. Annual PM₁₀ background concentrations for the MAA exceed the statewide average, while MAA PM_{2.5} concentrations fall below the statewide average.

Pollutant	Annual Background for MAA	Annual Statewide Average
PM ₁₀	33	22
PM _{2.5}	5	8

Sulfur dioxide (SO₂) and sulfates (SO₄) form during combustion from trace levels of sulfur in coal or diesel fuel. Sulfur dioxide also participates in chemical reactions and can form sulfates and sulfuric acid in the atmosphere. Background concentrations of sulfur dioxide are 2–12% of the applicable WAAQS (Table 3.2.1.1).

Sulfur dioxide concentrations typically range from 1 to 10 ppb (2.6 to 26 µg/m³) in remote areas, and from 20 to 200 ppb (52 to 520 µg/m³) in polluted areas (Seinfeld 1986). Average weekly concentrations of sulfur dioxide at the Pinedale CASTNet site are 0.3 ppb (0.8 µg/m³) and are typical of remote or unpolluted areas.

Mean annual sulfate concentrations are typically 0.6 ppb (2.5 µg/m³) or less in remote areas, and 2.5 ppb (10 µg/m³) or more in urban areas (Stern et al. 1973). Mean annual concentrations of sulfate are 0.5 ppb (2 µg/m³) at the Pinedale CASTNet site and are typical of remote or unpolluted areas.

3.2.2.1.2 Climate and Climate Change

The Kemmerer, Rock Springs and Rawlins Field Offices are located in a semi-arid, mid-continental climate regime typified by dry, windy conditions, limited rainfall, and long, cold winters (Trewatha and Horn 1980). Table 3.2.1.3 summarizes potentially affected climate components in the area based on data collected at several long-term meteorological stations located in and near the Kemmerer, Rock Springs and Rawlins Field Office areas.

Wyoming Meteorological Station	Description
Kemmerer Water Treatment Station	Mean annual temperature: 39.3 °F Mean annual precipitation: 9.78 inches Mean annual snow depth: 2 inches Mean annual snowfall: 50.9 inches
Rock Springs	Mean annual temperature: 44.1 °F Mean annual precipitation: 8.51 inches Mean annual snow depth: 1 inch Mean annual snowfall: 49.2 inches
LaBarge	Mean annual temperature: 39 °F Mean annual precipitation: 8.03 inches Mean annual snow depth: 1 inch Mean annual snowfall: 31.7 inches
Rawlins	Mean annual temperature: 43.0 °F Mean annual precipitation: 9.00 inches Mean annual snow depth: 2 inches Mean annual snowfall: 51.6 inches
Source: (Western Regional Climate Center 2006)	

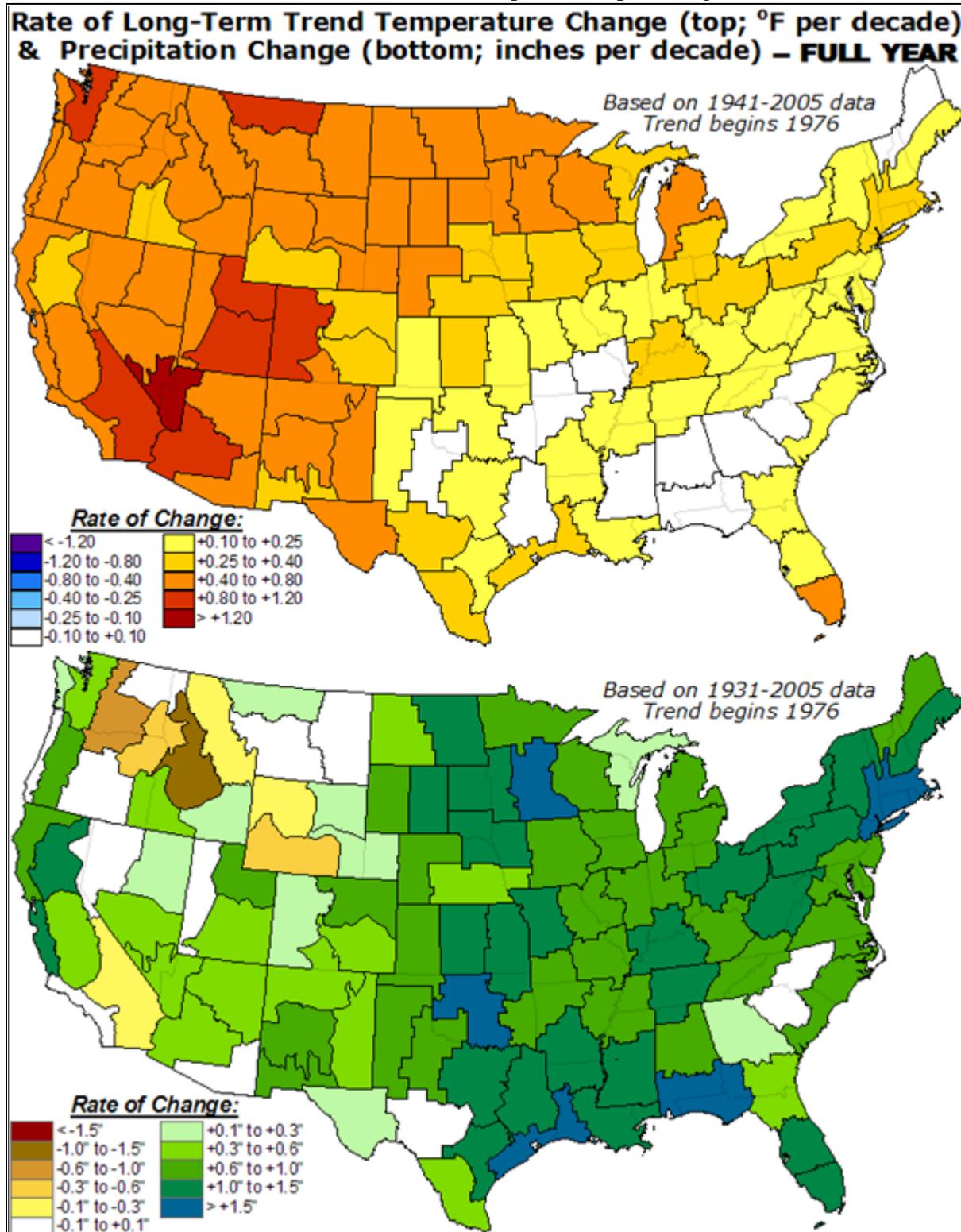
The region is subject to strong, gusty winds that are often accompanied by snow and blizzard conditions during the winter. Winds frequently originate from the west to northwest, and the mean annual wind speed is 9 miles per hour.

Wind strength and frequency affects dispersion of noises, odors, and transport of dust and other airborne elements. Therefore, the region’s strong winds increase the potential for atmospheric dispersion of pollutants.

Climate change refers to any significant change in measures of climate (e.g., temperature or precipitation) lasting for an extended period (decades or longer). Global mean surface temperatures have increased nearly 1.8°F from 1890 to 2006. Models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Northern latitudes (above 24°N) have exhibited temperature increases of nearly 2.1° F since 1900, with nearly a 1.8°F increase since 1970 alone. Temperature in western Wyoming is expected to increase by 0.25 to 0.40 degrees Fahrenheit per decade while temperatures in surrounding locations in Utah, Wyoming, and Colorado are expected to increase by 0.40 to 1.2 degrees Fahrenheit per decade with the largest decrease expected in southwestern Wyoming (Figure 3.2.1.2). Precipitation

across western Wyoming is expected to decrease by 0.1 to 0.6 inches per decade with the largest decrease expected in southwestern Wyoming (Figure 3.2.1.2).

Figure 3.2.1.2: Long-term Temperature (top) and Precipitation (bottom) Trends in the United States from NOAA Climate Prediction Center (<http://www.cpc.noaa.gov>).



Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (such as changes in ocean circulation); human activities that change the atmosphere's composition (such as burning fossil fuels) and the land surface (such as urbanization) (IPCC 2007). Several activities that occur in the Kemmerer, Rock Springs and Rawlins Field Office areas contribute to the phenomena of climate change, including large wildfires and activities using combustion engines; changes to the natural carbon cycle; changes to radioactive forces and reflectivity (albedo); and emissions of greenhouse gases (GHGs), especially carbon dioxide and methane, from fossil fuel development.

Greenhouse gases are composed of molecules that absorb and reradiate infrared electromagnetic radiation. When present in the atmosphere the gas contributes to the greenhouse effect. Some GHGs such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities. The primary GHGs that enter the atmosphere as a result of anthropogenic activities include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Fluorinated gases are powerful GHGs that are emitted from a variety of industrial processes including production of refrigeration/cooling systems, foams and aerosols. Fluorinated gases are not primary to the activities authorized by the BLM and will not be discussed further in this document.

The Center for Climate Strategies (CCS) prepared the Wyoming Greenhouse Gas Inventory and Reference Case Projection 1990-2020 (Inventory) for the WDEQ through an effort of the Western Regional Air Partnership (WRAP). This inventory report presents a preliminary draft greenhouse gas (GHG) emissions inventory and forecast from 1990 to 2020 for Wyoming. This report provides an initial comprehensive understanding of Wyoming's current and possible future GHG emissions. The information presented provides the state with a starting point for revising the initial estimates as improvements to data sources and assumptions are identified.

The inventory report discloses that activities in Wyoming accounted for approximately 56 million metric tons (MMt) of *gross* carbon dioxide equivalent (CO₂e) emissions in 2005, an amount equal to 0.8% of total US gross GHG emissions. These emission estimates focus on activities in Wyoming and are *consumption-based*; they exclude emissions associated with electricity that is exported from the state. Wyoming's gross GHG emissions increased 25% from 1990 to 2005, while national emissions rose by only 16% from 1990 to 2004. Annual sequestration (removal) of GHG emissions due to forestry and other land-uses in Wyoming are estimated at 36 MMtCO₂e in 2005. Wyoming's per capita emission rate is more than four times greater than the national average of 25 MtCO₂e/yr. This large difference between national and state per capita emissions occurs in most of the sectors – Wyoming's emission per capita significantly exceed national emissions per capita for the following sectors: electricity, industrial, fossil fuel production, transportation, industrial process and agriculture. The reasons for the higher per capita intensity in Wyoming are varied but include the state's strong fossil fuel production industry and other industries with high fossil fuel consumption intensity, large agriculture industry, large distances, and low population base. Between 1990 and 2005, per capita emissions in Wyoming have increased, mostly due to increased activity in the fossil fuel industry, while national per capita emissions have changed relatively little.

Ongoing scientific research has identified the potential impacts of anthropogenic GHG emissions and changes in biological sequestration due to land management activities on global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused carbon dioxide equivalent (CO₂e) concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change (IPCC) recently concluded that “warming of the climate system is unequivocal” and “most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations” (IPCC 2007.)

It is important to note that GHGs will have a sustained climatic impact over different temporal scales. For example, recent emissions of carbon dioxide can influence climate for 100 years. In contrast, black carbon is a relatively short-lived pollutant, as it remains in the atmosphere for only about a week. It is estimated that black carbon is the second greatest contributor to global climate change behind CO₂ (Ramanathan and Carmichael, 2008). Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

Some authorized activities within the Kemmerer, Rock Springs and Rawlins Field Offices generate GHG emissions. Oil and gas development activities can generate CO₂ and NH₄ (during processing). Carbon dioxide emissions result from the use of combustion engines for OHV and other recreational activities. Wildland fires also are a source of CO₂ and other GHG emissions, and livestock grazing is a potential source of methane. Other activities in the Kemmerer, Rock Springs and Rawlins Field Office area with the potential to contribute to climate change include soil erosion from disturbed areas and fugitive dust from roads, which have the potential to darken snow-covered surfaces and cause faster snow melt. A description of the potential GHG emissions associated with the parcels proposed for leasing is included in Section 4.

3.2.2.1.3 Visibility

The 1997 CAA amendments declared “as a National Goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas in which impairment results from manmade air pollution.” The CAA gives federal managers the affirmative responsibility, but no regulatory authority, to protect air quality-related values, including visibility, from degradation.

PSD increments limit air quality degradation and ensure that areas with clean air continue to meet NAAQS, even during economic development. The PSD program goal is to maintain pristine air quality required to protect public health and welfare from air pollution effects and “to preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreation, scenic or historic value.”

PSD increments have been established for NO₂, SO₂, and PM₁₀. Comparisons of potential PM₁₀, NO₂, and SO₂ concentrations with PSD increments are intended only to evaluate a threshold of concern. The allowable PSD increment depends on an area's classification. Class I areas have lower increments, due to their protected status as pristine areas. PSD Class I and other sensitive

Table 3.2.1.4: Distances and Direction to Class I Areas.

Class I Area	Dist. From KFO (km)	Direction From KFO	Dist. From RFO (km)	Direction From RFO	Dist. From PFO (km)	Direction From PFO	Dist. From RSFO (km)	Direction From RSFO
Bridger Wilderness Area	>50 <100	North	>200 <250	Northwest	<50	East	>50 <100	North
Fitzpatrick Wilderness Area	>100 <150	North	>200 <250	Northwest	<50	East	>50 <100	North
Grand Teton National Park	>150 <200	North	>400 <450	Northwest	>50 <100	Northwest	>100 <150	Northwest
Mount Zirkel Wilderness Area	>250 <300	East	>100 <150	Southeast	>200 <250	Southeast	>150 <200	Southeast
Savage Run/Platte River Wilderness Area	>200 <250	Southeast	>50 <100	Southeast	>150 <200	Southeast	>100 <150	Southeast
Teton Wilderness Area	>100 <150	North	>400 <450	Northwest	>50 <100	Northwest	>100 <150	Northwest
Washakie Wilderness Area	> 150 <200	North	>300 <350	North	>100 <150	North	>250 <300	North

Table 3.2.1.5: Distances and Direction to Class II Sensitive Areas and other areas of concern in southern Wyoming.

Sensitive Class II Areas	Dist. From KFO (km)	Direction From KFO	Dist. From RFO (km)	Direction From RFO	Dist. From PFO (km)	Direction From PFO	Dist. From RSFO (km)	Direction From RSFO
Fossil Butte National Monument	Within	N/A	>200 <250	West	>100 <150	Southwest	>100 <150	Northwest
Popo Agie Wilderness Area	108	Northeast	>150 <200	Northwest	>100 <150	East	>100 <150	North
Seedskadee NFR	Adjoins	East	>200 <250	West	>50 >100	South	Adjoins	West

Cokeville Meadows NFR	Within	N/A	>250 <300	West	>100 <150	Southwest	>150 <200	Northwest
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areas located in close proximity to the Rawlins and Kemmerer Field Offices and the distance of each from the field office are shown on Map 3-1. Federal Class I areas are listed in Table 3.2.1.4. Several additional areas are classified as PSD Class II, where lower incremental air quality limits are imposed due to less pristine background air quality. PSD Class II areas are listed in Table 3.2.1.5.

A wide variety of pollutants can impact visibility, including particulate matter, nitrogen dioxide, nitrates (compounds containing NO₃), and sulfates (compounds containing SO₄). Fine particles suspended in the atmosphere decrease visibility by blocking, reflecting, or absorbing light.

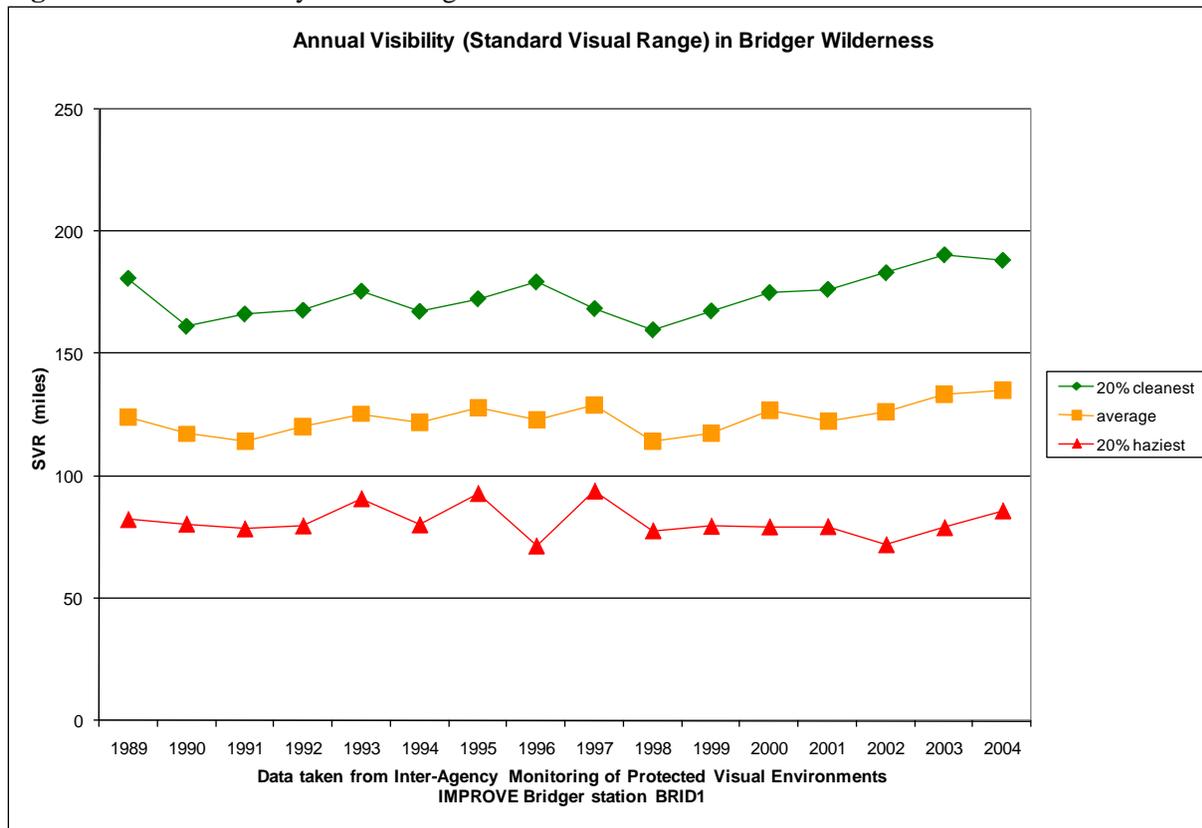
Two types of visible impairment can be caused by emission sources: plume impairment and regional haze. Plume impairment occurs when a section of the atmosphere becomes visible due to the contrast or color difference between a discrete pollutant plume and a viewed background, such as a landscape feature. Regional haze occurs when pollutants from widespread emission sources become mixed in the atmosphere and travel long distances.

Visibility is quantified in terms of the deciview (dv), which is defined as a change in visibility that is perceptible to the average human, and in terms of the standard visible range (SVR), which is defined as the distance that an average human can see. Visibility data are calculated for each day, ranked from cleanest to haziest, and reported into three categories:

- 20% cleanest: mean visibility for the 20% of days with the best visibility
- Average: the annual mean visibility
- 20% haziest: mean visibility for the 20% of days with the poorest visibility

Visibility data were collected in the Bridger Wilderness from 1989 to 2003. The mean annual SVR varies from 198–162 miles (or 2–4 dv) on clear days, 133–109 miles (or 6–8 dv) on average days, and 12–10 miles (or 10–12 dv) on hazy days (Figure 3.2.1.3).

Figure 3.2.1.3: Visibility in the Bridger Wilderness.



Deposition:

Through a process called atmospheric deposition, air pollutants fall out of the atmosphere and are deposited on terrestrial and aquatic ecosystems. These pollutants are deposited via wet deposition (precipitation) and dry deposition (gravitational settling of particles and gaseous pollutants that adhere to soil, water, and vegetation). Substances deposited include:

- Acids, such as sulfuric acid and nitric acid (HNO₃) (referred to as “acid rain”)
- Air toxins, such as pesticides, herbicides, and VOCs
- Nutrients, such as nitrate and ammonium (NH₄⁺)

Deposition is reported as the mass of material deposited on an area (kilogram per hectare per year). Total deposition refers to the sum of airborne material transferred to the Earth’s surface by both wet and dry deposition.

A brief summary of current atmospheric deposition in the region is included in Table 3.1.2.6. These data represent several locations in the region, including Pinedale, Gypsum Creek, and Yellowstone National Park.

The natural acidity of rainwater is represented by pH values ranging from 5.0 to 5.6 (Seinfeld 1986). Precipitation pH values lower than 5.0 are considered acidified and may adversely affect plants and animals. A voluntary level of concern for a decrease in pH levels in rainwater has been estimated to be 0.1–0.2 (U.S. Department of Agriculture 1989).

Table 3.2.1.6: Summary of Current Atmospheric Deposition.

Deposition Component	Description
Precipitation pH	Precipitation pH demonstrates some acidification <ul style="list-style-type: none"> • Pinedale: 4.8–5.4 • Gypsum Creek: 5.0–5.4 • Yellowstone National Park: 5.2–5.6
Total nitrogen deposition	Total nitrogen deposition is less than levels of concern <ul style="list-style-type: none"> • Pinedale: 1.0–1.5 kg/ha-year
Total sulfur deposition	Total sulfur deposition is less than levels of concern <ul style="list-style-type: none"> • Pinedale: 1–2 kg/ha-year

Total deposition voluntary levels of concern have been estimated for several areas (U.S. Department of Agriculture 1989). Estimated total deposition guidelines include the “red line” (defined as the total deposition that the area can tolerate) and the “green line” (defined as the acceptable level of total deposition).

Total nitrogen deposition guidelines for the Bridger Wilderness include the red line (set at 10 kg/ha-year) and the green line (set at 3–5 kg/ha-year). Actual mean annual total nitrogen deposition ranged from below 1.5 kg/ha-year to above 3.5 kg/ha-year (Figure 3.1.2.4). Total sulfur depositions guidelines for include the green line (set at 5 kg/ha-year) and the red line (set at 20 kg/ka-year). Mean annual total sulfur deposition ranged from 1 kg/ha-year to nearly 3 kg/ha-year (Figure 3.1.2.5). For sulfur, the measured baseline deposition is well below the voluntary levels of concern (green line). For nitrogen, some deposition levels exceed the lower limits of the green line.

Figure 3.1.2.4: Mean Annual Nitrogen Deposition for Hobbs Lake and Black Joe Lake.

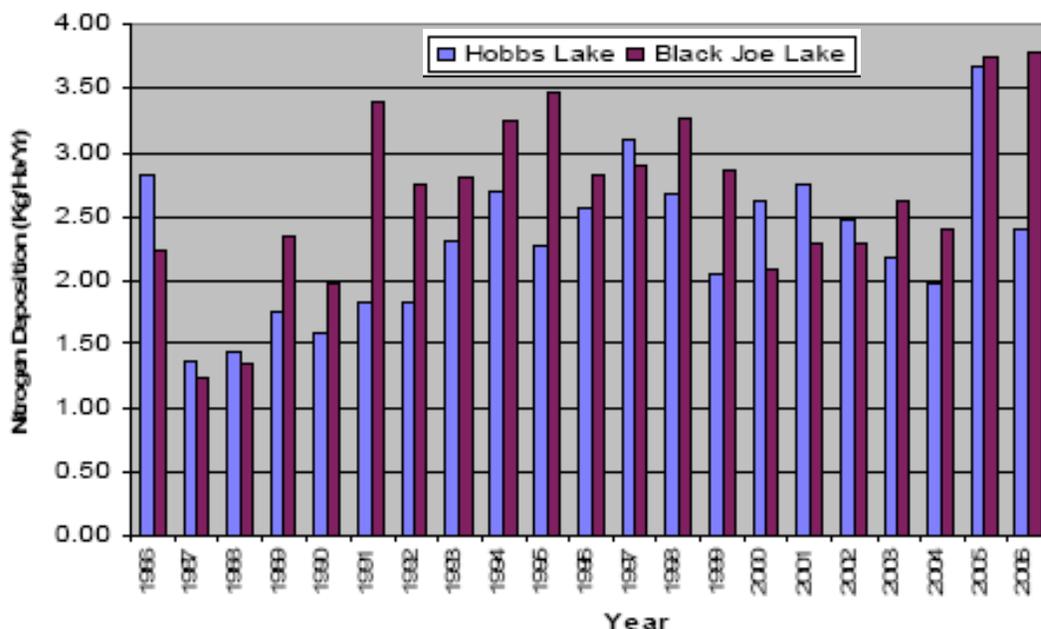
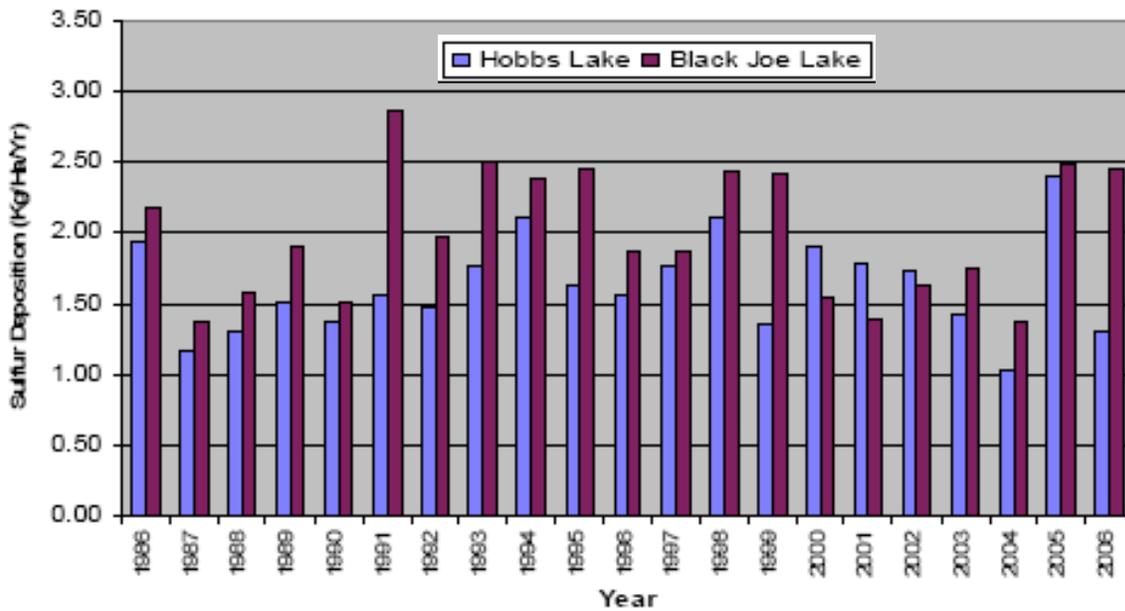


Figure 3.2.1.5: Mean Annual Sulfur Deposition for Hobbs Lake and Black Joe Lake.



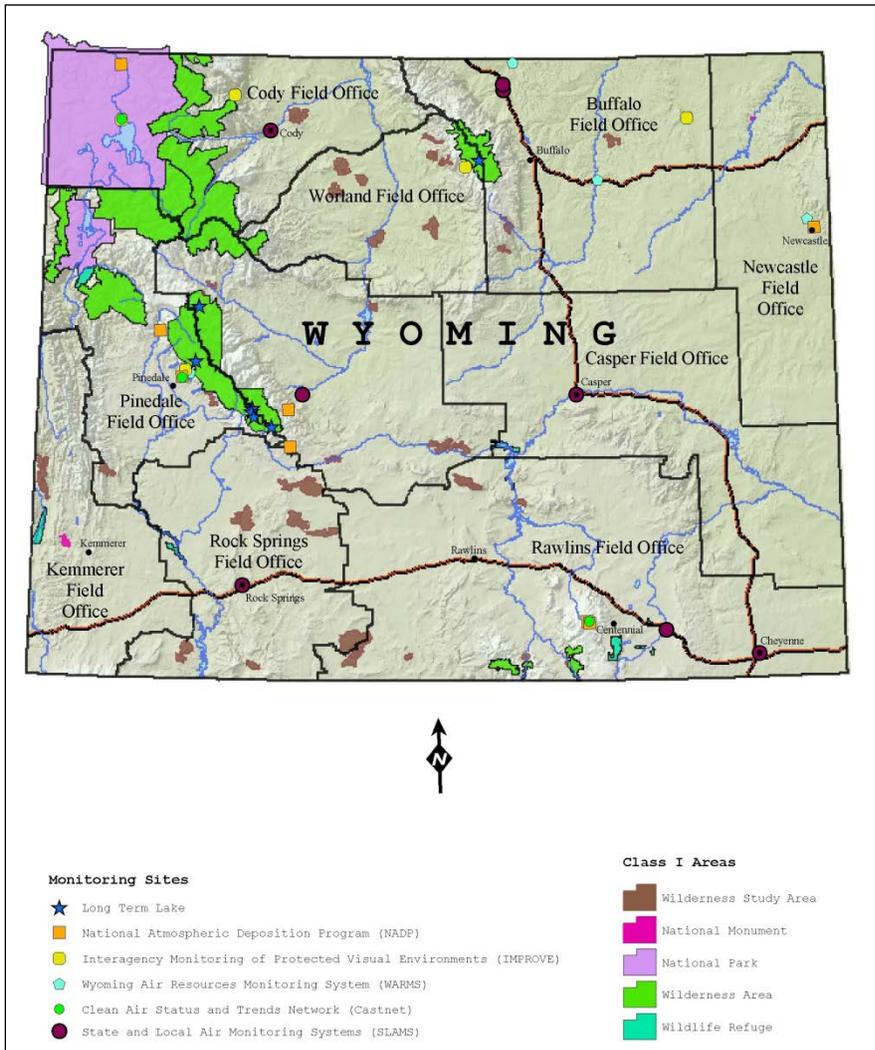
Atmospheric deposition of nitrogen and sulfur compounds can cause acidification of lakes and streams. One expression of lake acidification is a change in acid neutralizing capacity (ANC), which is a lake’s ability to resist acidification from atmospheric deposition. ANC is expressed in units of micro-equivalents per liter ($\mu\text{eq/l}$). Lakes with ANC values of 25 to 100 $\mu\text{eq/l}$ are considered to be sensitive to atmospheric deposition; lakes with ANC values of 10 to 25 $\mu\text{eq/l}$ are considered to be very sensitive; and lakes with ANC values of less than 10 are considered to be extremely sensitive. Table 3.2.1.7 summarizes distances and direction from RFO and KFO to sensitive lakes in the region.

Table 3.2.1.7: Distance and Direction to Sensitive Lakes

Sensitive Lake Receptors	Distance From KFO (km)	Direction from KFO	Distance From RFO (km)	Direction from RFO
Black Joe Lake, Bridger Wilderness Area	142	North	182	Northwest
Deep Lake, Bridger Wilderness Area	139	North	180	Northwest
Upper Frozen Lake, Bridger Wilderness Area	137	North	175	Northwest
Ross Lake, Fitzpatrick Wilderness Area	194	North	250	Northwest
Lower Saddlebag Lake, Popo Agie Wilderness Area.	140	North	160	Northwest

Site-specific lake water chemistry background data (pH, ANC, total bulk deposition of nitrate, sulfate, etc.) have been collected by the USFS in several high mountain lakes in the nearby Wilderness Areas. Deposition data – total nitrogen and sulfur, nitrate and sulfate – from 1986 through 2006 are shown below.

Lake acidification is measured in terms of change in ANC, which is the lake’s buffering capacity to resist acidification from atmospheric deposition of acid compounds such as sulfates and nitrates. Measured background ANC data for USFS identified sensitive lakes within the modeling domain are provided in Table 3.2.1.8. The 10th percentile lowest ANC values were calculated for each lake, following procedures provided by the USFS. The ANC values proposed for use in this analysis, and the number of samples used in the calculation of the 10th percentile lowest ANC values, are provided in Table 3.2.1.8.



Map 3.2.1.1: Class I Airshed and Air Quality Monitoring Stations in Wyoming.

Table 3.1.2.8: Background Acid Neutralizing Capacity Values for Acid Sensitive Lakes.				
Lake	Wilderness Area	10th Percentile Lowest ANC Value	Number of Samples	Sensitivity

		($\mu\text{eq/l}$)		
Black Joe	Bridger	67.1	67	Sensitive
Deep	Bridger	59.7	64	Sensitive
Upper Frozen	Bridger	6.0	8	Extremely Sensitive
Ross	Fitzpatrick	60.4	33	Sensitive
Lower Saddlebag	Popo Agie	54.2	32	Sensitive

The USFS considers lakes with ANC values greater than 25 microequivalents per liter ($\mu\text{eq/l}$) to be sensitive to atmospheric deposition and lakes with ANC values less than or equal to 25 $\mu\text{eq/l}$ are considered extremely sensitive. Of the lakes for which data is presented in Table 3.1.2.8, Upper Frozen and Lazy Boy lakes are considered extremely acid sensitive.

The USFS has identified a specific methodology to determine acceptable changes in ANC, which are used to evaluate potential air quality impacts from deposition at acid sensitive lakes. The USFS has established a level of acceptable change (LAC) of no greater than a 1 $\mu\text{eq/l}$ change in ANC (from human causes) for lakes with existing ANC levels less than or equal to 25 $\mu\text{eq/l}$. A limit of 10 percent change in ANC reduction was adopted for lakes with an ANC greater than 25 $\mu\text{eq/l}$.

3.2.2.2 Wildlife

Wildlife resource associated with each parcel/partial parcel available to offer for leasing are listed under the parcel headings above. Studies conducted by Matt Holloran for the Greater sage-grouse (Holloran, M. J., 2005, Greater sage-grouse (*Centrocercus urophasianus*) population response to natural gas field development in western Wyoming. PhD Dissertation. University of Laramie, Wyoming. 211pp.), Berger for pronghorn (Berger Kim Murray, et.al., 2008, Wildlife and Energy Development Pronghorn of the Upper Green River Basin – Year 3 Summary), and Hall Sawyer for mule deer (Hall Sawyer et.al., September 2010, Mule Deer Monitoring in the Pinedale Anticline Project Area: 2010 Annual Report) demonstrate that intense oil and gas development such as that occurring on the Pinedale Anticline can affect these species use of the crucial big game winter habitat in close proximity to the development, as well as migration corridors. As stated in Section 1.3, only 6.5 percent of the leases sold and 5.3 percent of the acreage leased since 1969 were actually developed into production. Accordingly, it is not possible to determine or even reasonably project at the leasing stage whether a parcel will be leased and if it is whether or not it will be developed or what the intensity level of that development may be. The EISs for the Kemmerer, Green River, and Rawlins RMPs evaluated affects to crucial big game winter and parturition ranges, including overlapping winter ranges of multiple species and concluded that areas containing the parcels addressed in this EA would be satisfactorily mitigated through the timing limitation stipulation.

Parcels 1, 3, 5, 9,-11, 24, 25, 30-34, 38-43, 46, 46, 62-66, 69, 71-76, 89-90, 94, 95, 106, 107, 110, 111, 124-130, 132, 134-136, 140-159, 171-174, 176, 180-187, 189, 196-202, 211, 212-219, 223-225, 228, 231, 232, 235-237, 241-245, and 250 are located within Wyoming Game and Fish Department (WGFD) designated crucial big game winter habitat. Parcels 9-12, 25, 80, 101, 110, 111, 217, 222, and 223 fall within identified big game parturition habitat. Parcels 10, 12, 13, 15, 17-20, 33-35, 203-206, 211, 212-217, 219, 221-223, 225-229, 231, and 233-248 intersect big game migration corridors as delineated by the WGFD. None of the proposed parcels occur

within the nationally renowned pronghorn migration route, however some parcels do fall within the transition habitat between summer and winter ranges (see figure 1 in the *Big Game Migration Corridors in Wyoming*, Feeney, et al, 2004, University of Wyoming).

3.2.2.3 Special Status Species

Section 7 of the Endangered Species Act (ESA) requires that BLM land managers ensure that any action authorized, funded, or carried out by the BLM is not likely to jeopardize the continued existence of any Federally Designated Threatened or Endangered species, and that it avoids any appreciable reduction in the likelihood of recovery of affected species. Parcels 222, 223, 247, and 248 potentially contain Canada lynx habitat (note: parcels 247 and 248 contain split estate lands with rural subdivisions containing numerous residences).

The BLM's Special Status Species Policy outlined in BLM Manual 6840 and IM WY-2010-027; (Update of the Bureau of Land Management, Wyoming, Sensitive Species List - 2010) is to conserve listed species and the ecosystems on which they depend, while ensuring that actions authorized or carried out by BLM are consistent with the conservation needs of special status species and do not contribute to the need to list any of these species. The BLM's policy is intended to contribute to the survival of those species that are rare or uncommon, either because they are restricted to specific uncommon habitat or because they may be in jeopardy due to human or other actions.

By BLM policy, species proposed for federal listing are to be managed with the same level of protection provided for threatened and endangered species. The policy for federal candidate species and BLM sensitive species is to ensure that no action that requires BLM approval should contribute to the need to list a species as threatened or endangered.

Other management direction is based on Kemmerer, Rawlins, and Green River RMP management objectives, activity level plans, and other aquatic habitat and fisheries management direction, including 50 CFR 17, the Land Use Planning Handbook, Appendix C, Part E, Fish and Wildlife.

The Kemmerer, Rawlins, and Green River RMPs provide listings of sensitive species within the field office areas, and have evaluated the need to protect habitat necessary for the success of species identified through these regulations and policies. All of the parcels identified as available for lease under Alternative B and C contain habitat or potentially contain habitat for sensitive species.

New information regarding the status of the Greater sage-grouse has elevated its status from a BLM sensitive species to a federal candidate species. The Greater sage-grouse is a candidate species for listing under provisions of the ESA as determined by the USFWS and documented in a March 5, 2010 Federal Register notice declaring that listing of the Greater sage-grouse was warranted but precluded. Greater sage-grouse are distributed in sagebrush habitat throughout the central and western portions of the High Desert District, where habitat fragmentation and degradation have not reduced habitat to an unsuitable state. Greater sage-grouse leks are generally at mid elevations within sagebrush habitat. Nesting and brood-rearing habitat is sometimes associated with the lek and sometimes found at a distance from the lek in sagebrush habitat. These remaining suitable sagebrush habitat areas could be productive for Greater

sage-grouse; however, fragmentation and degradation might limit their distribution and abundance. The Governor of Wyoming and the Wyoming Game and Fish Department (WGFD) have delineated Greater sage-grouse Core Population Areas (Core Areas), and have suggested special management for those areas.

Policy was issued by the BLM Wyoming in December 2009 under IM WY-2010-012 (Greater sage-grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands including the Federal Mineral Estate) and WY-2010-013 (Oil and Gas Lease Screen for Greater sage-grouse); additional policy was issued by the BLM Washington Office under IM WO 2010-071 (Gunnison and Greater sage-grouse Management Considerations for Energy Development (Supplement to *National Greater sage-grouse Habitat Conservation Strategy*)). The processed Oil and Gas Lease Screen for Greater sage-grouse for the parcels that would be deferred from the May 2012 lease sale can be found in Appendix A.

There are many sources of habitat fragmentation, all of which may affect the Greater sage-grouse. Industrial development, livestock grazing, mining, gravel pit operations, oil and gas activity, land exchanges and disposal, vegetation manipulation, fuel reduction projects and other activities may introduce artificial components to the natural habitat. Structures such as powerlines and towers, as well as other disruptive industrial activities may cause avoidance and abandonment of habitat. Livestock grazing, fuels treatments, and weed infestations are factors that may cause habitat degradation depending upon severity, intensity, and design. West Nile virus, which recently has had lethal effects on Greater sage-grouse in parts of Wyoming, could become an important factor in Greater sage-grouse survival. To date, there is only one known case of West Nile virus in Greater sage-grouse within the HDD. However, the potential does exist for the virus to occur more frequently within the Kemmerer, Rawlins, and Rock Springs Field Offices. This is due to water impoundments associated with produced water disposal, reservoirs, stock tanks or other features that would create an environment suitable for mosquito larva to persist.

Greater sage-grouse have been declining across the west, which has prompted the filing of several petitions to list them as threatened under the ESA, including a recent petition that led to the March 5, 2010 finding by the USFWS of warranted for listing but precluded. Areas in central and western Wyoming where sagebrush dominates landscapes and grouse populations remain relatively contiguous and intact, cumulatively represent one of the species' last strongholds. The number of male Greater sage-grouse counted per lek in Wyoming decreased 17 percent between 1985 and 1995 (RRMP), and regional declines as high as 73 percent between 1988 and 1999 have been recorded.

Numerous parcels on the May 2012 list provide nesting and/or winter range; and/or breeding habitat for Greater sage-grouse, (see the Table 3.2). Parcels 8-12, 15, 25, and 34 contain habitat for sharp-tailed grouse.

Parcels 1-4, 19, 20, 79, 80, 86-92, and 252 are located in the Platte River drainage which provides habitat for the threatened and endangered pallid sturgeon fish species. Parcels 8-18, 25-28, 33-36, 38, 40-46, 62-66, 69-78, and 93-248 036-042, 047-055, 057-116, 118, 119, and part of parcel 117 are in the Colorado River drainage which provides habitat for the threatened and endangered Colorado pikeminnow, razorback sucker, bonytail, and humpback chub fish species. Parcels 157, 159, 181, 196, and 200 in the Rock Springs Field Office contain segments of the

Henry's Fork, which contains a conservation population of Colorado River cutthroat trout (CRCT). These parcels plus parcels 158, 171, 180, 201, and 202 are in a project area where Trout Unlimited (TU), state and federal agencies are working with water users and landowners to improve a barrier to insure that no invasive species from the Flaming Gorge Reservoir can access the Henry's Fork and risk harming conservation populations of CRCT. Work is also under way with land owners to improve irrigation efficiency as well as assessing barriers to fish passage throughout the Henry's fork watershed. Parcels 8-18, 25-28, 38, and 43 fall within Little Snake River and Savery Creek drainage the is designated as a potential CRCT recovery area, but also contains streams with conservation populations. Projects are underway in the Little Snake and Savery drainages to restore CRCT and their habitat, such as fish barrier removals on Dirtyman and Hell Canyon Creeks, and reconstructing four diversion structures for fish passage.

In 2006, USFWS, BLM, USFS, NPS, and fish & wildlife management agencies in Colorado, Wyoming, and Utah jointly developed a conservation agreement and strategy to "assure the long-term viability of CRCT throughout their historic range."

Parcels 248-251 are located in the Bear River drainage. Portions of the Bear River and its tributaries contain conservation populations of Bonneville cutthroat trout (BCT) or are identified as having the potential for BCT expansion. The BCT is a designated sensitive species. In 2008 the USFWS determined that there is a viable, self-sustaining Bonneville cutthroat trout population well distributed throughout its historic range and that the population is being restored or protected in all currently occupied watersheds; it was subsequently determined that the Bonneville cutthroat trout did not warrant listing as a threatened or endangered species under the Endangered Species Act. In December 2000, state and federal agencies, including BLM, entered into a "Range-wide Conservation Agreement and Strategy for Bonneville Cutthroat Trout". The agreement established goals and objectives to "ensure the long-term existence of Bonneville cutthroat trout within its historic range".

Projects have been implemented in the Hams Fork, Rock Creek, an Bear River drainages to restore native trout populations and habitat for CRCT and BCT. Nine projects, including removal of barriers to fish passage, installation of fish screens on irrigation diversions, and the consolidation of irrigation diversions, have been completed.

Semlitsch and Bodie (October 2003) state, "It is generally acknowledged that terrestrial buffers or riparian strips 30–60 m wide will effectively protect water resources". They further state the importance of amphibian and reptilian core habitat and suggest including "three terrestrial zones adjacent to core aquatic and wetland habitats . . . (1) a first terrestrial zone immediately adjacent to the aquatic habitat, which is restricted from use and designed to buffer the core aquatic habitat and protect water resources; (2) starting again from the wetland edge and overlapping with the first zone, a second terrestrial zone that encompasses the core terrestrial habitat defined by semiaquatic focal-group use (e.g., amphibians . . .); and (3) a third zone, outside the second zone, that serves to buffer the core terrestrial habitat from edge effects from surrounding land use." and "Although wetlands vary in many characteristics related to type, region, topography, climate, and land-use surrounding them, the data we compiled suggest that a single all-encompassing value for the size of core habitats can be used effectively." Based on the definition for riparian habitat (i.e., areas adjacent to rivers and streams with a differing density, diversity, and productivity of plant and animal species relative to nearby uplands) is appears that the core habitat zone would correlate with riparian areas. Semlitsch and Bodie recommend a minimum core zone of 142

meters (465 feet). BLM's 500 foot buffer from the edge of riparian habitat or surface water meets this minimum core zone width. They also recommend a 50 meter upland buffer.

A Google[™]earth review of Twin Creek near Sage Junction, the Little Snake River, Savery Creek and tributaries, the Hams Fork and tributaries indicate that these streams appear to commonly have riparian habitat extending 100 feet or more from the streams. Where the riparian habitat is 100 feet or greater, the 500 foot buffer would essentially meet the core and upland buffer.

Thomomys clusius (Wyoming pocket gopher), a species on the BLM Wyoming sensitive species list, was petitioned to be included on the threatened and endangered species list. US Fish and Service subsequently determined that listing was not warranted. The Wyoming pocket gopher is known to occur only in Sweetwater and Carbon Counties in Wyoming. As its range is currently defined, the Wyoming pocket gopher appears to occur primarily on multiple-use lands managed by the BLM. These lands are extensively intermixed with parcels of private land. A variety of biological factors can make animals intrinsically susceptible to disturbance, including narrow distribution, habitat specificity, restrictive territoriality and area requirements, susceptibility to disease, low dispersal capability, high site fidelity, and low reproductive capability.

Parcel 181, 200, 201, and 202 contain portions of the Special Status Species Plant Sites areas designated by the Green River RMP. In accordance with the RMP, the designated sites are protected by a No Surface Occupancy stipulation.

3.2.2.4 Lands with Wilderness Characteristics

Wilderness characteristics are resource values that include naturalness, outstanding opportunities for solitude, or outstanding opportunities for primitive and unconfined recreation. Areas evaluated for wilderness characteristics generally occur in undeveloped locations of sufficient size (typically greater than 5,000 contiguous acres) to be practical to manage for these characteristics.

The BLM Land Use Planning Handbook (H-1601-1) states that the BLM must consider the management of lands with wilderness characteristics during the land use planning process. The criteria used to identify these lands are essentially the same criteria used for determining wilderness characteristics for wilderness study areas (WSA). However, the authority set forth in section 603(a) of FLPMA to complete the three-part wilderness review process (inventory, study, and report to Congress) expired on October 21, 1993; therefore, FLPMA does not apply to new WSA proposals and consideration of new WSA proposals on BLM-administered public lands is no longer valid. The BLM is still required under Section 201 of FLPMA to “. . .maintain on a continuing basis an inventory of all public lands and their resource and other values . . .” This includes reviewing lands, in this case lease parcels, to determine if they possess wilderness characteristics (refer to Appendix D). Accordingly, the parcels (excluding the parcels identified in Section 1.1 as not available for leasing) were screened to determine whether the parcels, or portions of the parcels, are located in areas that contain wilderness characteristics.

Parcels 45, 46, 62-66 fall within the Adobe Town DRUA that was developed through the Rawlins RMP analysis of a citizen's wilderness proposal. Approximately 145 acres along the southern edge of parcel 46 occur in an area within the Rawlins Field Office identified as having wilderness characteristics. Based on a 2002 inventory, the Rawlins RMP determined “the lands

to be unmanageable for wilderness character because of preexisting oil and gas leases, the BLM elected to manage lands with wilderness character for multiple use and not for protection of wilderness character. Accordingly, measures to provide protection for any wilderness characteristics of lands (outside of previously established WSAs) will not be considered in the alternatives in this RMP. This is consistent with BLM policy as presented in BLM IM 2003-275” which was corroborated by a BLM interdisciplinary team review in July 2011, which is in accordance BLM IM2011-154. Parcels 62-66 are within the Kinney Rim South citizen wilderness proposal (CWP), which the 2002 inventory the concluded “*does not have supplemental values. Due to the abundance of human impacts, the area was determined not to have wilderness characteristics.*”

There are no congressionally designated wilderness areas on BLM-administered lands within the HDD, but there are five wilderness study areas located within the RFO, one in KFO, and thirteen in RSFO (note Adobe Town WSA occurs within portions of the Rawlins and Rock Springs Field Offices). They are:

Rawlins Field Office

Adobe Town WSA
Ferris Mountains WSA
Encampment River Canyon WSA
Prospect Mountain WSA
Bennett Mountains WSA.

Kemmerer Field Office

Raymond Mountain WSA

Rock Springs Field Office

Adobe Town WSA
Whitehorse Creek WSA
Honeycomb Buttes WSA
Oregon Buttes WSA
Alkali Draw WSA
South Pinnacles Buttes WSA
Alkali Basin/East Sand Dunes WSA
Sand Dunes WSA
Buffalo Hump WSA
Red Creek Badlands WSA
Devil’s Playground WSA
Twin Buttes WSA
Red Lake WSA

WSAs are managed according to the non-impairment standard. Under this standard, these lands are managed in a manner so as not to impair the suitability of such areas for preservation as wilderness. At present, the BLM manages these lands in accordance with the Kemmerer, Rawlins, and Green River RMPs, and the Interim Management Policy for Lands Under Wilderness Review until Congress either designates each WSA as “wilderness” or releases it from consideration and the land reverts to multiple-use management. None of the parcels on the May 2012 list are within or adjacent to any of the WSAs; however parcels 062-066 are located between 3 and 9 miles southwest of the Adobe Town WSA.

Parcels or portions of parcels 62, 63, 64, 65, 66, 69, 73, 74, 75, 76, and 94 are within the Kinney Rim North and/or South citizen proposed wilderness. Parcels or portions of parcels 156, 158, 160-167, 184-186, 188, and 189 are within a citizen proposed wilderness adjoining the Twin Buttes and Devil’s Playground WSAs; Parcels 45 and 46 fall within the Adobe Town citizens’ proposed wilderness; Parcels 150, 151, 153, and 154 fall within the Elk Mountain citizens’ proposed wilderness . Parcel 78 falls within the Oregon Buttes Badlands and Big Empty citizens’ proposed wilderness areas. Parcels 156, 158, 160, 161, 162, 163, 164, 165, 167, 184, 185, 188, and 189 fall within the Devils Playground citizens’ proposed wilderness area. however as shown in Appendix D, BLM has determined that the area containing these parcels does not contain lands with wilderness characteristics.

3.2.2.5 Cultural And Paleontology Resources

All parcels addressed in this EA, have the potential to contain surface and buried archaeological materials. Once the decision is made by the lessee to develop a lease, area specific cultural records review would be done to determine if there is a need for a cultural inventory of the areas that could be affected by the subsequent surface disturbing activities. Generally, a cultural inventory will be required before new surface disturbance and all historic and archaeological sites that are eligible for listing in the National Register of Historic Places or potentially eligible to be listed would be either avoided by the undertaking or have the information in the sites extracted through archaeological data recovery before surface disturbance. Numerous parcels have contributing segments of National Historic Trails (NHT), see Table 3.2. Parcels 243-245 are within viewshed setting of the Bridger Antelope Trap in the Kemmerer Field Office.

The parcels addressed in the EA also have a potential to contain vertebrate and non-vertebrate fossils. Post-lease development proposals would be evaluated on a case-by-case basis to determine if paleontological surveys would be required prior to surface disturbance.

3.2.2.6 Socioeconomics Resources

The proposed lease parcels are located in Albany, Carbon, Laramie, Lincoln, Sublette, Sweetwater, and Uinta Counties, Wyoming. Table 3.1.1 shows changes in population for each county between 2000 and 2010. In terms of the actual number of people, Laramie County was the fastest-growing county, increasing its population by a more than 10,000 individuals; Carbon County had the smallest population change which was closest to the national average. Sublette County had a 73.1 percent increase.

Table 3.1: Population by County, 1980-2000

Area	Population in 2000	Population in 2010	Change 1980-2000	
			Total	Percent
Albany County	32,014	36,299	4,285	13.4
Carbon County	15,639	15,885	246	1.6
Laramie County	81,607	91,738	10,131	12.4
Lincoln County	14,573	18,106	3,533	24.2
Sublette County	5,920	10,247	4,327	73.1

Sweetwater County	37,613	43,806	6,193	16.5
Uinta County	19,742	21,118	1,376	7.0
Wyoming	206,608	237,199	30,591	14.8

Sources: U.S. Census Bureau

Social conditions in the Kemmerer, Rawlins, and Rock Springs Field Office areas that concern human communities include towns, cities, rural areas, and the custom, culture, and history of the area as it relates to human settlement, as well as current social values. BLM management actions can impact social conditions in the area and in nearby communities. The area considered for this analysis is comprised of the counties of Albany, Carbon, Laramie, Lincoln, Sublette, Sweetwater, and Uinta.

The economy of the study area is based primarily on resource development (e.g., mining, agriculture) and services. Mining, including oil and gas, provides a large part of the employment and income of the communities in the area. Mining has been the key economic driver for development of the communities in southwestern Wyoming and continues to provide much of the economic base in terms of jobs, household incomes, and tax revenues that allow governments at the local, state, and national level to attempt to meet the demand for essential services that is being driven by the growth in the oil and gas sector.

Although the U.S. Census Bureau (2006) does not make available all data on employee counts and payrolls due to confidentiality requirements, the data that are provided help to show the economic importance of mineral commodities. The mining demographic statistics, which include oil and gas exploration, extraction, and associated operations, for 2006 show that mining and oil and gas development are a lesser component of the economic status in southeastern Wyoming (Albany and Laramie Counties); whereas as it is a more important component of the economic employment base in south central and southwestern Wyoming. Mining or oil and gas related jobs in Albany County comprise 0.2 percent of the employment base; in Laramie County 0.4 percent; in Carbon County 3 percent; in Sweetwater County 20 percent; in Uinta County 8 percent; in Lincoln County 7 percent; and in Sublette County it comprises 25 percent.

In general, resource development and protection are both important to sustaining the values within the area. However, the challenge is seeking an appropriate balance between resource development and protection, which is central to the BLM's mission and the RMP process. Therefore, even though some individuals and groups give a high priority to resource protection, others give a high priority to resource development; it is incumbent on the BLM to find an appropriate balance between these two competing philosophies. See section 3.3.2.10 for economic discussion related outdoor recreation.

3.2.2.7 Environmental Justice

Executive Order 12898 requires Federal agencies to assess projects to ensure there is no disproportionately high or adverse environmental, health, or safety impacts on minority and low income populations. A review of the parcels offered for lease indicates there are no disproportionately high or adverse impacts on minority and low-income populations.

3.2.2.8 Invasive, Non-Native Species

While there are no known populations of invasive or non-native species on the proposed parcels, infestations of noxious weeds can have a negative impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Locally, regionally, and nationally noxious weeds infestations result in cause decreased quality of agricultural products due to high levels of competition from noxious weeds; decreased quantity of agricultural products due to noxious weed infestations; and increased costs to control and/or prevent the noxious weeds.

Furthermore, noxious weeds can negatively affect livestock and dairy producers by displacing forage and/or making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed and animal health care costs. Increased costs to livestock and dairy producers are eventually borne by consumers.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control/prevention is not exercised. The field offices work cooperatively with county and local weed control agencies to identify and manage noxious weeds.

3.2.2.9 Wastes (Hazardous and/or Solid)

There are no identified hazardous or solid waste sites on the parcels addressed in this EA. Should a parcel be leased and developed, generation and temporary storage of waste materials (solid and liquid) would likely occur. They would be managed in accordance with Onshore Orders 1 & 7, Resource Conservation and Recovery Act (RCRA), applicable Wyoming Department of Environmental Quality (WDEQ) regulations, and Wyoming Oil and Gas Conservation Commission (WOGCC) rules. Fluid handling would be evaluated at the development stage and fluids associated with any subsequent drilling and/or production would either be treated, evaporated, or transferred to an approved WDEQ treatment facility; solids would be treated on site or transferred to a WDEQ approved facility.

3.2.2.10 Water Quality (Surface and Ground)

Surface water hydrology within the area is typically determined by geology, precipitation, and water erosion. Factors that currently affect surface water resources include livestock grazing management, private, commercial and industrial development, recreational use, drought, and vegetation control treatments. The referenced RMPs/FEISs provide additional information on water quality, which is hereby incorporated by reference. Ephemeral drainages that discharge into perennial waters are located within the various parcels/partial parcels available for offer. Spring fed perennial surface waters do exist within a number of the proposed parcels, see Table 3.2. Parcel 252 contains a segment of Seminoe Reservoir.

Groundwater hydrology within the area is primarily a product of geology and recharge rates. Groundwater quality and quantity can be influenced by precipitation, and water supply wells and various disposal activities. Groundwater quality across the Kemmerer, Rawlins, and Rock Springs Field Offices varies with depth from potable waters with low total dissolved solids (TDS) to highly saline, non-potable sources; additionally known areas of fluoride levels in exceedances of state water quality standards exist within all four field offices. Most of the groundwater in KFO, RFO, and RSFO area is used for industrial, domestic and livestock

purposes. Parcels 1-4, 8-20, 25-28, 30, 36, 59, 60, 62-64, 75, 196-199, 203-206, 221-228, 230, 231, 238-240, 245-249, and 251 contain land with private surface overlying federal minerals (i.e. split-estate). The private surface lands have or have the potential to contain private residences and associate facilities such as domestic water supply wells.

Parcels 238, 239, 247, and 248 contain rural residential subdivisions that have residential water supply wells, and parcel 019 and a portion of parcel 016 occur in an area that contains 15 springs and a connecting pipeline system that provide a substantial portion of the municipal water to the City of Rawlins, WY. Otherwise, there are no known domestic water supply sources on or in the general vicinity of the available parcels/partial parcels.

3.2.2.11 Recreation

Recreational use of the available parcels and the surrounding areas is typically for hunting, fishing, camping, sightseeing, driving for pleasure, off-highway vehicle use, and other recreational activities. In the national survey of fishing, hunting and wildlife-associated recreation for activities in 2006, expenditures from fishing and hunting significantly increased. In Wyoming, more than 320,000 people participated in fishing and hunting in 2006. Additionally, 716,000 people participated in some form of wildlife watching (USFWS 2006 National Survey of Fishing, Hunting, and Wildlife Associated Recreation). The total number of hunting and fishing recreation use days in Wyoming in 2008 was 3,683,371. Based on the number of recreation days and average expenditure per day, hunters, anglers and trappers expended approximately \$685 million in pursuit of their sport (WGFD Annual Report 2008). Non-consumptive users provided about \$420 million through wildlife watching, wildlife photography, etc. In total, wildlife associated recreation accounted for over \$1 billion dollars in income to the state for the year 2008 (WGFD Annual Report 2008).

For lands managed by the Department of the Interior (which include those BLM lands within the May 2012 lease sale) more than 437 million recreational visits in 2010 supported more than 388,000 jobs nationwide and contributed over \$44 billion in economic activity, including 14,000 jobs in Wyoming (“The Department of Interior’s Economic Contributions”. June 2011. U.S. Dept. of Interior). For Wyoming, the outdoor recreation experiences boost economic activity from hunting, angling, and tourism, supporting 52,000 jobs across the state, contributing more than \$4.4 billion annually to Wyoming’s economy, generates \$250 million annually in state tax revenue and produces \$3.6 billion annually in retail sales and services across Wyoming (accounting for 17% of gross state product)(Outdoor Industry Foundation, 2006. “The Active Outdoor Recreation Economy”. www.outdoorindustryfoundation.org).

Trout are considered the most popular sport fish in the United States and in 2006, it was estimated that more than 6.8 million anglers fished for trout (U.S. Fish and Wildlife Service, 2006. *Trout Fishing in 2006: A Demographic Description and Economic Analysis*. Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife Associated Recreation. Report 2006-6). In Wyoming, it is estimated that of the 203,000 freshwater anglers over the age of 16 who fish, more than 88 percent seek trout, making Wyoming the state with the second highest participation rate for trout fishing in the U.S.

Portions of parcel 008, 009, 010, 011, and 012 abut the Medicine Bow National Forest and a portion of parcel 008 adjoins a small piece of the Battle Mountain Research Natural Area (RNA). Lot 12 is the only portion of parcel 008 that adjoins the RNA. Lot 12, Section 5 T12N, R88W is

a 2.02 acre portion of parcel WY-1205-008 that is approximately 45 feet wide and 2000 feet long. The east end of the 45-foot wide strip of Lot 12 abuts the northwest corner of the RNA. The ROD for the Medicine Bow National Forest Revised Land and Resource Management Plan (LRMP) (December 2003) states at Section B.5 on page 5, “The Battle RNA is available for oil and gas leasing; however, no ground-disturbing oil and gas activities are permitted. Leasing in the Battle RNA will be with a no surface occupancy (NSO) stipulation” and further states in Section 2.2 Research Natural Areas on page 2-30 of the LRMP, “Allow oil and gas leasing; however no ground disturbance activities are permitted.” No portion parcel 008 or Lot 12 extends onto the Medicine Bow National Forest and even if it did a decision to lease parcel 008 would be compatible with the LRMP. The 45-foot width of lot 12 is too narrow for the construction of a well pad. The National Forest lands adjoining parcel 009-012 are designated through the December 2003 ROD as available for oil and gas leasing

3.2.2.12 Public Health and Safety

Oil and gas development, as well as other industrial use such as coal and trona mining has been occurring in the Kemmerer, Rawlins, and Rock Springs Field Offices for many decades. Due to the scattered nature and the small area encompassed by the respective parcels coupled with the industrial safety programs, standards, and state and federal regulations, offering these parcels is not expected to materially increase health or safety risks to humans, wildlife, or livestock. Parcels 1-4, 8-20, 25-28, 30, 36, 59, 60, 62-64, 75, 196-199, 203-206, 221-228, 230, 231, 238-240, 245-249, and 251 contain land with private surface overlying federal minerals (i.e. split-estate). The private surface lands have or have the potential to contain private residences and associate facilities such as domestic water supply wells. Parcels 238, 239, 247, and 248 contain rural residential subdivisions

In accordance with Federal Aviation Administration regulation surface use restrictions would be applied to parcels located within 10,000 feet of the runways of public airports. Parcels 229, 230, 236 and 238 are located with 10,000 feet of the Bridger Airport runway near Lyman and Mountain View.

3.2.2.13 Visual Resource Management (VRM)

The fourth column from the left in Table 3.2 provides the VRM classification for the parcels on the May 2012 lease parcel list. Parcels 045, 046, and 062-066 are identified as being in VRM Class III based on the December 2008 Rawlins RMP. During the preparation of the Rawlins RMP, BLM did not update its Visual Resource Inventory (“VRI”) for the Rawlins Field Office. For this reason, the VRM portion of the RMP was remanded to the Rawlins Field Office in order to update the VRI and potentially revise the Visual Resource Management (“VRM”) classifications. In February 2011, the BLM issued the updated VRI and is in the process preparing an RMP revision utilizing the updated VRI data. Based on the VRI data the area containing parcels 045, 046, 062-066 has a VRI Class II designation; however the final VRM classification will not be determined until the ROD for the RMP VRM revision is approved. Concerning visual resource management until the VRM revision is completed the 2008 RMP ROD states, “Until such time, the Approved RMP will utilize the VRM class designations as established and analyzed in the No Action Alternative, Alternative 1 in the Proposed RMP/Final EIS (emphasis added). The VRM designation under Alternative 1 of the Proposed RMP/Final EIS, dated January 2008, for the area containing parcels 045, 046, and 062-066 is VRM Class III.

ENVIRONMENTAL IMPACTS

4.0 Description of Impacts

4.0.1 General Discussion

As previously stated, the sale and issuance of oil and gas leases is strictly an administrative action. Nominated leases are reviewed against the appropriate land use plan, and stipulations are attached to mitigate any known environmental or resource conflicts that may occur on a given lease parcel. On-the-ground impacts would not occur until a lessee applies for and receives approval to drill on the lease. The BLM cannot determine at the leasing stage whether or not a proposed parcel will actually be sold, or if it is sold and issued, whether or not the lease would be explored or developed. Consequently, the BLM cannot determine exactly where a well or wells may be drilled or what technology that may be used to drill and produce wells, so the impacts listed below are more generic, rather than site-specific. Additional NEPA analysis would be conducted prior to approval of an APD. This additional environmental documentation would provide site-specific analysis for that well location. Additional mitigation and BMPs (conditions of approval) may be applied at that time to mitigate identified impacts.

According to the Tenth Circuit Court of Appeals, site-specific NEPA analysis at the leasing stage may not be possible absent concrete development proposals. Whether such site-specific analysis is required depends upon a fact-specific inquiry. Often, where environmental impacts remain unidentifiable until exploration can narrow the range of likely drilling sites, filing of an APD to drill may be the first useful point at which a site-specific environmental appraisal can be undertaken (*Park County Resource Council, Inc. v. U.S. Department of Agriculture*, 10th Cir., April 17, 1987). In addition, the IBLA has decided that, "BLM is not required to undertake a site-specific environmental review before issuing an oil and gas lease when it previously analyzed the environmental consequences of leasing the land . . ." (*Colorado Environmental Coalition, et. al, IBLA 96-243, decided June 10, 1999*). However, when site-specific impacts are reasonably foreseeable at the leasing stage, NEPA requires the analysis and disclosure of such reasonably foreseeable site-specific impacts. (*N.M ex rel. Richardson v. BLM*, 565 F.3d 683, 718-19 (10th Cir. 2009).

4.1 Impacts of Alternative A (No Action)

Under this alternative none of the parcels designated as available would be offered for lease and there would be no subsequent physical impact to the existing environment caused by post-lease well development. The only impact resulting from the No Action Alternative would be to socioeconomics.

4.1.1 Socioeconomic Resource:

Based on the assumption that all of parcels and partial parcels that are designated as available for sale and would be sold and based on the minimum acceptable bid of \$2.00 per acre, the government would lose the opportunity to collect a minimum of \$470,471.24 under Alternative B and \$832,427.76 under Alternative C in lease fees, as well as any royalties that would be collected from any subsequent hydrocarbon production. Typically, lease bids are substantially higher than the \$2.00 per acre minimum; consequently the economic loss would likely be much higher than that projected. The State of Wyoming, as well as many counties and communities there, rely on oil and gas development for part of their economic base. The employment and purchasing opportunities associated with developing and producing wells on the leases is also

foregone, as would the opportunity to provide oil and gas resources from these lease parcels to help meet the nation's energy needs. Refer to the Kemmerer, Rawlins, and Green River RMPs and FEISs for additional socioeconomic analysis.

4.2 Impacts of Alternative B (Proposed Action)

Alternative B would result in 136 entire parcels and 17 partial parcels being offered at the May 2012 BLM Wyoming oil and gas lease sale. Again the reader is reminded that at the leasing stage BLM cannot predict whether or not any of the parcels will actually be sold, if they are sold and a lease is issued whether or not they will actually be developed, and if development does occur what the development level would be. Table 4.1a displays the stipulations that would be applied to each parcel to mitigate impacts. Parcels that would be offered in whole under Alternative B are WY-1205-001 through 005, 008-012, 014, 018, 020-025, 027, 030-036, 041-046, 052-056, 061-072, 077, 156-167, 170-189, 191-202, 204-211, 213-219, 223, 224, and 228-252. Parcels that would be offered in part are WY-1205-006, 007, 013, 015-017, 026, 028, 038, 040, 073, 076, 190, 203, 212, 221, and 225.

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
001	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
002	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>	<i>applied</i>			
003	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
004	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
005	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
006	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
007	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
008	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			
009	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>
010	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					<i>applied</i>
011	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>
012	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>
013	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
014	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
015	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
016	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
017	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
018	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
019	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
020	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
021	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
022	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
023	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
024	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>				

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
025	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>
026	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
027	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
028	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
029	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP										
030	<i>applied</i>										
031	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
032	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
033	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
034	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
035	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
036	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
037	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP										
038	<i>applied</i>										
039	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP										
040	<i>applied</i>										
041	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
042	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
043	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			
044	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
045	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
046	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
047	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
048	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				

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049	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
050	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
051	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
052	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
053	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
054	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
055	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
056	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
057	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
058	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
059	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>				
060	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
061	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>				
062	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
063	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
064	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
065	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
066	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
067	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
068	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
069	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
070	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
071	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
072	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>			

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073	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
074	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
075	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
076	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
077	<i>applied</i>	<i>applied</i>	<i>applied</i>								
078	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
079	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
080	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					<i>applied</i>
081	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
082	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
083	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
084	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
085	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan										
086	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
087	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
088	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
089	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
090	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
091	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
092	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
093	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
094	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		
095	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
096	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

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097	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
098	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
099	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
100	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
101	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
102	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
103	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
104	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
105	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
106	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
107	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
108	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
109	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
110	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						<i>applied</i>
111	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							<i>applied</i>
112	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						<i>applied</i>
113	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
114	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>		
115	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
116	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>		
117	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>		
118	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
119	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
120	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					

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121	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
122	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
123	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
124	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
125	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
126	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
127	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
128	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
129	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
130	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
131	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					
132	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
133	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
134	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
135	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
136	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
137	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
138	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
139	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
140	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
141	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
142	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
143	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
144	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
145	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
146	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
147	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
148	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
149	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
150	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
151	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
152	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
153	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
154	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
155	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
156	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
157	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
158	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
159	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
160	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
161	<i>applied</i>	<i>applied</i>	<i>applied</i>								
162	<i>applied</i>	<i>applied</i>	<i>applied</i>								
163	<i>applied</i>	<i>applied</i>	<i>applied</i>								
164	<i>applied</i>	<i>applied</i>	<i>applied</i>								
165	<i>applied</i>	<i>applied</i>	<i>applied</i>								
166	<i>applied</i>	<i>applied</i>	<i>applied</i>								
167	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
168	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
169	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
170	<i>applied</i>	<i>applied</i>	<i>applied</i>								
171	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
172	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
173	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
174	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
175	<i>applied</i>	<i>applied</i>	<i>applied</i>								
176	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
177	<i>applied</i>	<i>applied</i>	<i>applied</i>								
178	<i>applied</i>	<i>applied</i>	<i>applied</i>								
179	<i>applied</i>	<i>applied</i>	<i>applied</i>								
180	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
181	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
182	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
183	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
184	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
185	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
186	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
187	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
188	<i>applied</i>	<i>applied</i>	<i>applied</i>								
189	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
190	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
191	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			<i>applied</i>			
192	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
193	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
194	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>						
195	<i>applied</i>	<i>applied</i>	<i>applied</i>								
196	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
197	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
198	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
199	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
200	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
201	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>					
202	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
203	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>		
204	<i>applied</i>	<i>applied</i>	<i>applied</i>								
205	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>			<i>applied</i>	<i>applied</i>		
206	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
207	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>			<i>applied</i>		
208	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
209	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
210	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>					
211	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
212	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		
213	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>				
214	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
215	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					
216	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 1)

Parcel # WY- 1205-	Lease Notice #1 ¹	Lease Notice #2 ²	Lease Notice #3 ³	Big Game Winter TLS	Greater sage- grouse/ Sharp- tailed Nesting TLS	B. Owl/ Raptor Nesting TLS	Mountain Plover TLS	Bald Eagle Roost/Nest TLS or NSO	Greater sage- grouse winter TLS	Airport NSO or CSU	Big Game Birthing TLS/ CSU
217	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		<i>applied</i>
218	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							
219	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>		<i>applied</i>		
220	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
221	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
222	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		<i>applied</i>
223	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>							<i>applied</i>
224	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>		
225	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>		
226	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
227	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				<i>applied</i>		
228	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>					<i>applied</i>		
229	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>			<i>applied</i>	
230	<i>applied</i>	<i>applied</i>	<i>applied</i>			<i>applied</i>	<i>applied</i>			<i>applied</i>	
231	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
232	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>						
233	<i>applied</i>	<i>applied</i>	<i>applied</i>								
234	<i>applied</i>	<i>applied</i>	<i>applied</i>				<i>applied</i>				
235	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>				
236	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>	<i>applied</i>	
237	<i>applied</i>	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>				
238	<i>applied</i>	<i>applied</i>	<i>applied</i>							<i>applied</i>	
239	<i>applied</i>	<i>applied</i>	<i>applied</i>								
240	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>					

**Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations
Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section
(Part 2)**

Parcel # WY- 1205-	SG/ Sharp- Tailed Lek CSU	Raptor CSU	Amphib. Species CSU	Cult. Res. CSU or NSO	Historic Trails/ CSU &/or NSO	Sensitive Species CSU	DRUA CSU	VRM II CSU	Coal/ Trona CSU	SRMA/ SMA/ WHMA CSU or NSO	Flora/ Fauna NSO/ CSU	Big Game Migrate CSU
001			<i>applied</i>		<i>applied</i>	<i>applied</i>						
002					<i>applied</i>	<i>applied</i>						
003		<i>applied</i>				<i>applied</i>						
004						<i>applied</i>						
005			<i>applied</i>			<i>applied</i>						
006						<i>applied</i>						
007			<i>applied</i>			<i>applied</i>						
008		<i>applied</i>	<i>applied</i>			<i>applied</i>		<i>applied</i>				
009	<i>applied</i>		<i>applied</i>			<i>applied</i>						
010	<i>applied</i>		<i>applied</i>			<i>applied</i>						<i>applied</i>
011			<i>applied</i>			<i>applied</i>		<i>applied</i>				
012		<i>applied</i>	<i>applied</i>			<i>applied</i>						<i>applied</i>
013			<i>applied</i>		<i>applied</i>	<i>applied</i>				<i>applied</i>		<i>applied</i>
014			<i>applied</i>		<i>applied</i>	<i>applied</i>				<i>applied</i>		
015		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						<i>applied</i>
016			<i>applied</i>		<i>applied</i>	<i>applied</i>		<i>applied</i>		<i>applied</i>		
017			<i>applied</i>		<i>applied</i>	<i>applied</i>				<i>applied</i>		<i>applied</i>
018			<i>applied</i>		<i>applied</i>	<i>applied</i>						<i>applied</i>
019			<i>applied</i>			<i>applied</i>						<i>applied</i>
020			<i>applied</i>		<i>applied</i>	<i>applied</i>						<i>applied</i>
021			<i>applied</i>			<i>applied</i>						
022			<i>applied</i>			<i>applied</i>						
023						<i>applied</i>						
024			<i>applied</i>			<i>applied</i>						

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 2)

Parcel # WY- 1205-	SG/ Sharp- Tailed Lek CSU	Raptor CSU	Amphib. Species CSU	Cult. Res. CSU or NSO	Historic Trails/ CSU &/or NSO	Sensitive Species CSU	DRUA CSU	VRM II CSU	Coal/ Trona CSU	SRMA/ SMA/ WHMA CSU or NSO	Flora/ Fauna NSO/ CSU	Big Game Migrate CSU
025	<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						
026		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						
027			<i>applied</i>		<i>applied</i>	<i>applied</i>						
028		<i>applied</i>	<i>applied</i>			<i>applied</i>		<i>applied</i>				<i>applied</i>
029	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP											
030		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						
031		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						
032		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						
033	<i>applied</i>		<i>applied</i>			<i>applied</i>					<i>applied</i>	<i>applied</i>
034		<i>applied</i>	<i>applied</i>			<i>applied</i>						<i>applied</i>
035	<i>applied</i>		<i>applied</i>		<i>applied</i>	<i>applied</i>						<i>applied</i>
036			<i>applied</i>		<i>applied</i>	<i>applied</i>						
037	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP											
038		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>						<i>applied</i>
039	Parcel is in an area designated as unavailable for leasing under the Rawlins RMP											
040					<i>applied</i>	<i>applied</i>						
041					<i>applied</i>	<i>applied</i>						
042		<i>applied</i>			<i>applied</i>	<i>applied</i>						
043		<i>applied</i>	<i>applied</i>			<i>applied</i>						
044			<i>applied</i>		<i>applied</i>	<i>applied</i>						
045			<i>applied</i>			<i>applied</i>	<i>applied</i>					
046						<i>applied</i>	<i>applied</i>					
047		<i>applied</i>	<i>applied</i>			<i>applied</i>						
048		<i>applied</i>	<i>applied</i>			<i>applied</i>						

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 2)

Parcel # WY- 1205-	SG/ Sharp- Tailed Lek CSU	Raptor CSU	Amphib. Species CSU	Cult. Res. CSU or NSO	Historic Trails/ CSU &/or NSO	Sensitive Species CSU	DRUA CSU	VRM II CSU	Coal/ Trona CSU	SRMA/ SMA/ WHMA CSU or NSO	Flora/ Fauna NSO/ CSU	Big Game Migrate CSU
049			<i>applied</i>			<i>applied</i>						
050		<i>applied</i>	<i>applied</i>			<i>applied</i>						
051			<i>applied</i>			<i>applied</i>						
052			<i>applied</i>			<i>applied</i>						
053		<i>applied</i>	<i>applied</i>			<i>applied</i>						
054			<i>applied</i>			<i>applied</i>						
055			<i>applied</i>			<i>applied</i>						
056						<i>applied</i>						
057						<i>applied</i>						
058						<i>applied</i>						
059		<i>applied</i>	<i>applied</i>			<i>applied</i>						
060			<i>applied</i>			<i>applied</i>						
061			<i>applied</i>			<i>applied</i>						
062		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>					
063		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>					
064		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>					
065			<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>					
066		<i>applied</i>	<i>applied</i>		<i>applied</i>	<i>applied</i>	<i>applied</i>					
067						<i>applied</i>				<i>applied</i>		
068						<i>applied</i>				<i>applied</i>		
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070					<i>applied</i>	<i>applied</i>						
071					<i>applied</i>	<i>applied</i>			<i>applied</i>			

Table 4.1a Lease Notices, Timing Limitation Stipulations (TLS) and No Surface Occupancy (NSO) Stipulations Applied to the Lease Parcels Based on Affected Resources Elements Identified In the Affect Environment Section (Part 2)

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072						<i>applied</i>				<i>applied</i>		
073						<i>applied</i>						
074						<i>applied</i>						
075						<i>applied</i>						
076						<i>applied</i>						
077						<i>applied</i>						
078	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan											
079				<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
080	<i>applied</i>			<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
081	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan											
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084	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan											
085	Parcel is in an area designated as unavailable for leasing under the Jack Morrow Hills Coordinated Activity Plan											
086				<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
087	<i>applied</i>			<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
088				<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
089	<i>applied</i>			<i>applied</i>		<i>applied</i>		<i>applied</i>				
090				<i>applied</i>		<i>applied</i>		<i>applied</i>				
091	<i>applied</i>			<i>applied</i>		<i>applied</i>		<i>applied</i>				
092	<i>applied</i>			<i>applied</i>		<i>applied</i>		<i>applied</i>				
093						<i>applied</i>						
094						<i>applied</i>						

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095						<i>applied</i>						
096					<i>applied</i>	<i>applied</i>						
097	<i>applied</i>			<i>applied</i>		<i>applied</i>		<i>applied</i>				
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102				<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
103				<i>applied</i>		<i>applied</i>						
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109	<i>applied</i>					<i>applied</i>				<i>applied</i>		
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112				<i>applied</i>		<i>applied</i>		<i>applied</i>				
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118	<i>applied</i>				<i>applied</i>	<i>applied</i>						

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119					<i>applied</i>	<i>applied</i>						
120	<i>applied</i>				<i>applied</i>	<i>applied</i>						
121	<i>applied</i>			<i>applied</i>	<i>applied</i>	<i>applied</i>		<i>applied</i>				
122	<i>applied</i>				<i>applied</i>	<i>applied</i>						
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140	<i>applied</i>					<i>applied</i>				<i>applied</i>		
141	<i>applied</i>					<i>applied</i>				<i>applied</i>		

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142	<i>applied</i>					<i>applied</i>				<i>applied</i>		
143						<i>applied</i>				<i>applied</i>		
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162						<i>applied</i>		<i>applied</i>				
163						<i>applied</i>		<i>applied</i>				
164						<i>applied</i>						

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165						<i>applied</i>						
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167						<i>applied</i>		<i>applied</i>		<i>applied</i>		
168	<i>applied</i>					<i>applied</i>						
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186						<i>applied</i>						
187						<i>applied</i>						

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188						<i>applied</i>		<i>applied</i>				
189						<i>applied</i>		<i>applied</i>				
190						<i>applied</i>						
191						<i>applied</i>						
192	<i>applied</i>				<i>applied</i>	<i>applied</i>						
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209						<i>applied</i>						
210						<i>applied</i>						
211						<i>applied</i>						

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212						<i>applied</i>						
213						<i>applied</i>						
214						<i>applied</i>						
215						<i>applied</i>						
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217						<i>applied</i>		<i>applied</i>				
218						<i>applied</i>		<i>applied</i>				
219					<i>applied</i>	<i>applied</i>		<i>applied</i>				
220	<i>applied</i>					<i>applied</i>						
221						<i>applied</i>		<i>applied</i>				
222						<i>applied</i>		<i>applied</i>				
223						<i>applied</i>		<i>applied</i>				
224						<i>applied</i>		<i>applied</i>				
225						<i>applied</i>		<i>applied</i>				
226						<i>applied</i>		<i>applied</i>				
227	<i>applied</i>					<i>applied</i>		<i>applied</i>				
228						<i>applied</i>		<i>applied</i>				
229	<i>applied</i>				<i>applied</i>	<i>applied</i>						
230					<i>applied</i>	<i>applied</i>		<i>applied</i>				
231					<i>applied</i>	<i>applied</i>		<i>applied</i>				
232						<i>applied</i>						
233						<i>applied</i>						

4.2.1 Air Resources

4.2.1.1 Air Quality

The administrative act of offering any of these parcels and the subsequent issuing of leases would have no direct impacts to air quality. Any potential effects to air quality would occur if and when the leases were developed. Any proposed development project would be subject to additional analysis of possible air effects before approval. The analysis may include air quality modeling for the activity. Over the last 10 years, the development on federal oil and gas mineral estate in the Kemmerer, Rawlins, and Rock Springs Field Offices has resulted in an average of 315 wells being spudded annually (61 in KFO, 188 in RFO, and 66 in RSFO). These wells would incrementally contribute a small percentage of the total emissions (including GHG's) from oil and gas activities in Wyoming.

Potential impacts of development could include increased airborne soil particles associated with the construction of new well pads, pipelines, or roads, exhaust emissions from drilling equipment, compressors, vehicles, and dehydration and separation facilities, as well as potential releases of GHG and volatile organic compounds during drilling or production activities. The amount of increased emissions cannot be quantified at this time since it is unknown how many wells might be drilled, the types of equipment needed if a well were to be completed successfully (e.g. compressor, separator, dehydrator), or what technologies may be employed by a given company for drilling any new wells. The degree of impact will also vary according to the characteristics of the geologic formations from which production occurs.

The Reasonably Foreseeable Development (RFD) in the Rawlins RMP assumes that 3711 federal wells would be drilled over a 20 life of project assumption (LOP), which equates to approximately 186 wells drilled per year. The RFD was derived for analysis purposes on a field office-wide basis and is not intended to be a development cap. The Reasonably Foreseeable Development Scenario (RFD) document for the Kemmerer RMP estimated that approximately 120 wells would be drilled annually for Federal minerals. The RFD for Rock Springs FO is 2400 (120/year). Drilling density (i.e., wells per square mile) and number of wells drilled annually depend on a number of variables including market trends, technology available (vertical, directional, or horizontal), and the geology of the hydrocarbon-bearing zone. As a result, the number of wells that could potentially be drilled under a full field development scenario as a result of offering the leases is unknown. Current APD permitting trends within the field offices confirm that these assumptions are still accurate. From fiscal years 2000 to 2009 (October 1999 through September 30, 2009), the RFO approved 2036 APDs, or an average of 204 APDs per year; the KFO approved 431 APDs, or an average of 43 APDs per year; the RSFO has approved 754 APDs, or an average of 75 APDs per year.

Subsequent development of any leases issued, would contribute a small incremental increase in overall emissions, including GHGs. When compared to total national or global emissions, the amount released as a result of potential production from the proposed lease tracts would not have a measurable effect.

Coal-bed natural gas (CBNG) development currently exists within the RFO. Approximately 8.5 percent of the active wells in the RFO are CBNG wells. The RFD grouped CBNG wells and conventional wells together in the scenario. RSFO also has existing CBNG development and has

a coal-bed natural gas RFD of approximately 15 wells per year. Based on the existing development and the RFD for the Rawlins and Rock Springs Field Offices, CBNG-related emissions can be expected. Although the RFD for the Kemmerer RMP assumes a CBNG development rate of up to 15 wells per year, there currently is no active or proposed CBNG development in the Field Office; therefore, there are no expected emissions. Several CBNG wells exist in the field office, but have proven unproductive; therefore there are no expected emissions from this source.

4.2.1.2 Greenhouse Gas Emissions

The administrative act of leasing 136 entire parcels and portions of 17 additional parcels covering 231,777.52 acres would not result in any direct GHG emissions. However, in regard to future development, the assessment of GHG emissions and climate change is in its formative phase. While it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of making the proposed tracts available for leasing, some general assumptions however can be made: offering the proposed tracts may contribute to drilling new wells.

Wyoming's gross GHG emissions are expected to continue to grow to 69 MMtCO₂e by 2020, 56% above 1990 levels. As shown in Figure ES-3 of the inventory report, demand for electricity is projected to be the largest contributor to future emissions growth, followed by emissions associated with transportation. Although GHG emissions from fossil fuel production had the greatest increase by sector in the period 1990 to 2005, the growth from this sector is projected to decline due to the assumption of decreased carbon dioxide emissions from venting at processing plants.

The Petroleum Association of Wyoming website (<http://www.pawyo.org/facts.html>) reports there were 39,491 active gas and oil wells in the state, 45 operational gas processing plants, 5 oil refineries, and over 9,000 miles of gas pipelines. There are significant uncertainties associated with estimates of Wyoming's GHG emissions from this sector. This is compounded by the fact that there are no regulatory requirements to track CO₂ or CH₄ emissions. Therefore, estimates based on GHG emissions measurements in Wyoming are not possible at this time. (Wyoming GHG Inventory and Reference Case Projection CCS, Spring 2007)

However, as reported by the same CCS inventory report, emissions from this (fossil fuel production) sector grew by 101% from 1990 to 2005 and are projected to increase by a further 10% between 2005 and 2020. The natural gas industry is the major contributor to both GHG emissions and emissions growth, with CH₄ emissions from coal mining second. That said, it is worth noting that a significant portion of the emissions attributed to the natural gas industry are due to vented gas from a processing plants, many of which are used for injection in enhanced oil recovery operations. Additionally, many technological advances in emission control technology have been implemented by the oil and gas industry to reduce emission levels.

Some information and projections of impacts beyond the project scale are becoming increasingly available. Chapter 3 of the Climate Change Supplementary Information Report for Montana, North Dakota, and South Dakota (Climate Change SIR, 2010) describes impacts of climate change in detail at various scales, including the state scale when appropriate. The following bullet points summarize potential changes identified by the EPA (EPA, 2008) that are expected

to occur at the regional scale, where the proposed action and its alternatives are to take place. The EPA identifies this area as part of the Mountain West and Great Plains region (<http://www.epa.gov/Region8/climatechange/pdf/ClimateChange101FINAL.pdf>):

- The region is expected to experience warmer temperatures with less snowfall.
- Temperatures are expected to increase more in winter than in summer, more at night than in the day, and more in the mountains than at lower elevations.
- Earlier snowmelt means that peak stream flow would be earlier, weeks before the peak needs of ranchers, farmers, recreationalist, and others. In late summer, rivers, lakes, and reservoirs would be drier.
- More frequent, more severe, and possibly longer-lasting droughts are expected to occur.
- Crop and livestock production patterns could shift northward; less soil moisture due to increased evaporation may increase irrigation needs.
- Drier conditions would reduce the range and health of ponderosa and lodgepole pine forests, and increase the susceptibility to fire. Grasslands and rangelands could expand into previously forested areas.
- Ecosystems would be stressed and wildlife such as the mountain line, black bear, long-nose sucker, marten, and bald eagle could be further stressed.

Other impacts could include:

- Increased particulate matter in the air as drier, less vegetated soils experience wind erosion.
- Shifts in vegetative communities which could threaten plant and wildlife species.
- Changes in the timing and quantity of snowmelt which could affect both aquatic species and agricultural needs. Projected and documented broad-scale changes within ecosystems of the U.S. are summarized in the Climate Change SIR (2010). Some key aspects include:
- Large-scale shifts have already occurred in the ranges of species and the timing of the seasons and animal migrations. These shifts are likely to continue (USGCRP 2009, as cited in the Climate Change SIR, 2010). Climate changes include warming temperatures throughout the year and the arrival of spring an average of 10 days to 2 weeks earlier through much of the U.S. compared to 20 years ago. Multiple bird species now migrate north earlier in the year.
- Fires, insect epidemics, disease pathogens, and invasive weed species have increased and these trends are likely to continue. Changes in timing of precipitation and earlier runoff increase fire risks.
- Insect epidemics and the amount of damage that they may inflict have also been on the rise. The combination of higher temperatures and dry conditions have increases insect populations such as pine beetles, which have killed trees on millions of acres in western U.S. and Canada. Warmer winters allow beetles to survive the cold season, which would normally limit populations; while concurrently, drought weakens trees, making them more susceptible to mortality due to insect attack.

While long-range regional changes might occur within this project area, it is impossible to predict precisely when they could occur. The following example summarizing climate data for the West North Central Region (MT, ND, SD, and WY) illustrates this point at the regional scale.

A potential regional effect of climate change is earlier snowmelt and associated runoff. This is directly related to spring-time temperatures. Over a 112 year record, overall warming is clearly evident with temperatures increasing 0.21 degrees per decade (Figure E). This would suggest that runoff may be occurring earlier than in the past. However, data from 1991-2005 indicates a 0.45 degree per decade cooling trend (Figure F). This example is not an anomaly, as several other 15-year windows can be selected to show either warming or cooling trends. Some of these year-to-year fluctuations in temperature are due to natural processes, such as the effects of El Niños, La Niñas, and the eruption of large volcanoes (summarized in the Climate Change SIR 2010). This information illustrates the difficulty of predicting actual regional or site specific changes or conditions which may be due to climate change during any specific time frame.

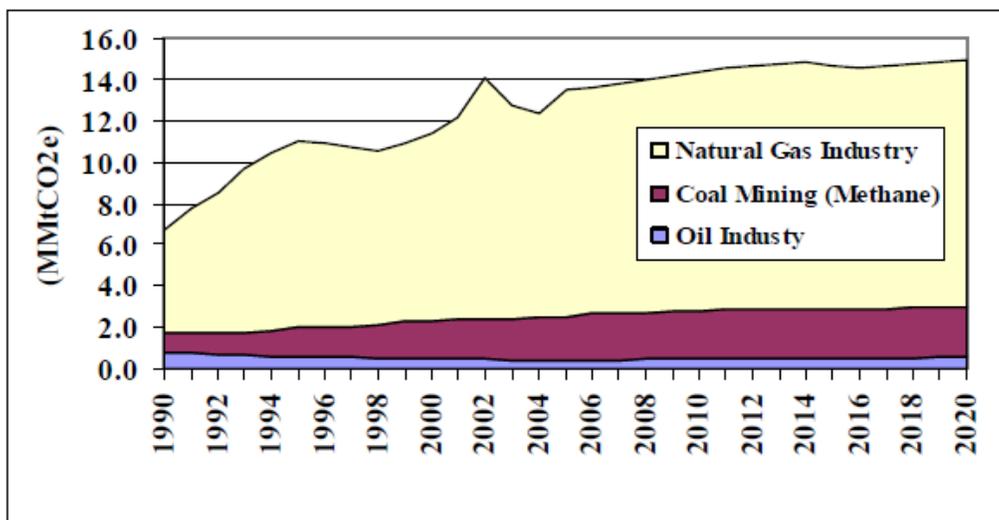
Table E2. Methane Emissions and Projections from the Fossil Fuel Industry

(Million Metric Tons CO ₂ e)	1990	1995	2000	2005	2010	2015	2020
Fossil Fuel Industry	6.7	11.0	11.4	13.5	14.4	14.7	14.9
Natural Gas Industry	5.0	9.0	9.2	11.0	11.6	11.8	12.0
Production (CH ₄)	0.2	0.3	0.8	1.6	2.3	2.5	2.6
Processing (CO ₂ & CH ₄)	4.1	7.9	7.7	8.2	7.6	7.6	7.5
Methane Emissions (CH ₄)	1.4	1.4	1.3	1.2	1.6	1.7	1.8
Vented Gas (CO ₂ & CH ₄)	2.6	6.5	6.4	6.9	6.0	5.9	5.7
Transmission (CH ₄)	0.6	0.7	0.6	1.1	1.6	1.6	1.7
Distribution (CH ₄)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Industry	0.8	0.6	0.5	0.4	0.5	0.5	0.5
Production (CH ₄)	0.7	0.6	0.5	0.4	0.5	0.5	0.5
Refineries (CH ₄)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coal Mining (CH₄)	1.0	1.4	1.8	2.1	2.3	2.4	2.4

The value 0.00 in the above table indicates emissions less than 0.005 MMtCO₂e.

Figure E1 displays the CH₄ emissions from coal mining and natural gas and oil systems, on an MMtCO₂e basis.

Figure E1. Fossil Fuel Industry Emission Trends (MMtCO₂e)



Source: CCS calculations based on approach described in text.

See Section 4.30 for a discussion of the impacts of these potential greenhouse gas emissions on global climate change. Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development project is proposed.

4.2.1.3 Climate

The assessment of GHG emissions and climate change is in its formative phase. It is currently not feasible to know with certainty the net impacts from the proposed action on climate. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.

4.2.1.4 Mitigation

The BLM holds regulatory jurisdiction over portions of natural gas and petroleum systems, identified in the EPA Inventory of US Greenhouse Gas Emissions and Sinks document. Exercise of this regulatory jurisdiction has led to development of "Best Management Practices (BMPs)" designed to reduce emissions from field production and operations. Analysis and approval of future development on the lease parcels may include applicable BMPs as Conditions of Approval (COAs) in order to reduce or mitigate GHG emissions, if necessary and within the authority of the BLM to administer. Additional measures developed at the project development stage may be incorporated as applicant-committed measures by the project proponent, added to necessary State of Wyoming air quality permits, or as COAs in the approved APD or with a programmatic EIS.

Such mitigation measures may include, but are not limited to:

- Flare hydrocarbon and gases at high temperatures in order to reduce emissions of incomplete combustion through the use of multi-chamber combustors;
- "Green" (flareless) completions;
- Water dirt roads during periods of high use in order to reduce fugitive dust emissions;
- Require that vapor recovery systems be maintained and functional in areas where petroleum liquids are stored;
- Installation of liquids gathering facilities or central production facilities to reduce the total number of sources and minimize truck traffic;
- Use of natural gas fired or electric drill rig engines;
- The use of selective catalytic reducers on diesel-fired drilling engines; and,
- Re-vegetate areas of the pad not required for production facilities to reduce the amount of dust from the pads.

The EPA Inventory data show that adoption by industry of the BMPs proposed by the EPA's Natural Gas Energy Star program has reduced emissions from oil and gas exploration and development (Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006). KFO, RFO, and RSFO would work with industry to facilitate the use of the relevant BMPs for operations proposed on federal mineral leases where such mitigation is consistent with agency policy.

4.2.2 Wildlife

As previously stated, it is not possible to predict whether or not a parcel would be sold and if it is sold, whether or not it would be developed. Should a lease be developed and surface disturbing

and/or disruptive activities occur on the parcels containing crucial big game winter range during the crucial wintering period, it could cause impacts to wintering moose, mule deer, pronghorn, and elk, such as causing animals to move to less suitable winter habitat and conceivably causing fetal abortion by pregnant females. Well pad, road, and pipeline development into areas currently void of surface disturbing or disruptive activities would result in habitat fragmentation, which, depending on the intensity of the development, vegetative cover and terrain, could affect the habitat viability. Activities associated with development of oil and gas resources, is highly likely to experience displacement of wildlife. As stated in Section 1.3, it is not possible at the lease offering stage to accurately predict whether a parcel would actually be leased; if it is leased, whether or not a given parcel would be explored or developed; and if explored or developed, what the development intensity (down-hole and surface well pad spacing) will be. Since 1969 only 6.3 percent of the federal oil and gas leases issued in Wyoming were actually developed and produced oil or gas. Since 2001 approximately 88 percent of the lease parcels offered for lease were actually leased. Twelve percent were not leased. Should activity occur that is analogous to that occurring on Pinedale Anticline, it could be assumed that impacts similar to those shown in the Sawyer (2010), Holloran (2005), and Berger (2008) studies would occur. Surface disturbing or disruptive activities within big game migration routes during the migration period could result in animals altering their travel routes and expending energy needed during the winter season to avoid the activity.

4.2.2.1 Special Status Species

Under this alternative, 136 whole parcels and 17 partial parcels would be offered at the May 2012 oil and gas lease sale pending the Greater sage-grouse amendment to the Kemmerer, Rawlins, and Green River RMPs. Due to IM WY-2010-012 and IM WY-2010-013 the BLM is currently amending 6 RMPs across the state. The goal of the RMP amendments is to have a state-wide plan that is consistent with the Governor of Wyoming's Executive Order 2011-5 and to provide adequate regulatory to avoid listing of the Greater sage-grouse under the Endangered Species Act.

IM WY-2010-013 directs the BLM to screen each parcel for sage-grouse Core Areas. Refer to the sage-grouse core area screen in Appendix B to see which parcels fall within Core Area and meet the manageability criteria identified in the IM. Post-lease projects within Core Area would be analyzed as directed by IM WY-2010-012.

Portions or all of 183 parcels under Alternative B are located in Greater sage-grouse/sharp-tailed or potential Greater sage-grouse habitat. When development activities are proposed, the BLM will conduct a site-specific analysis of the proposal and the current key Greater sage-grouse habitat boundaries (such as the State of Wyoming Governor's Core Areas). One hundred forty-four parcels are in key habitat. Based on site-specific environmental analysis, the BLM may require additional avoidance and/or impact minimization measures in order to manage Greater sage-grouse habitat in support of Wyoming's Greater sage-grouse Conservation Strategy and Wyoming Game and Fish Department Greater sage-grouse objectives. These measures may include, but are not limited to, disturbance density limitations or surface use and timing restrictions in proximity to certain habitats (e.g., severe winter relief habitat, Greater sage-grouse leks, etc.). Restrictions and prohibitions may be more restrictive than current RMP stipulation guidance if supported by site-specific NEPA analysis of a development proposal, the measures remain in conformance with the RMP, and are consistent with the existing lease rights granted.

Thirty-three parcels fall within a designated Greater sage-grouse key habitat area, but would not be deferred because they don't meet the manageability criteria in IM WY-2010-013 due to land ownership or existing development (including existing leases). Portions of fourteen parcels would be located with 0.6 miles of occupied leks in sage-grouse key habitat and would be deferred under this alternative.

In the event post lease development were to occur on lease in sage-grouse habitat, it could potentially result surface disturbing and/or disruptive activities within 2 miles or greater of a grouse lek or other known nesting habitats during the nesting period, within winter concentration areas, and/or within ¼ mile or greater of leks during the breeding season could cause substantial impacts to Greater sage-grouse. Impacts could include reduced breeding success and/or nest abandonment as well as causing the Greater sage-grouse to move to less suitable winter habitat. This would be the same for habitat within and outside key habitat areas. The private and state mineral estates within key habitat areas are not subject to BLM leasing or lease development regulations. As stated in Section 1.3, it is not possible at the lease offering stage to accurately predict whether a parcel will actually be leased; if it is leased, whether or not a given parcel would have exploration or development activities; and if explored or developed activity what that level (down-hole and surface well pad spacing) would be. Should activity occur that is analogous to that occurring in the Jonah Field or on Pinedale Anticline, it could be assumed that impacts similar to those shown in the Halloran study could occur. Impacts could include change in habitat use patterns (use of lower quality habitats), avoidance, noise disturbances, increases in invasive species, death due to collision and electrocution, decreased lek recruitment, habitat fragmentation, cumulative impacts, and creation of travel routes for land predators. The study indicates sage-grouse from disturbed leks where gas development occurred within 3 km of the lek site showed lower nesting rates, traveled farther to nest, and selected greater shrub cover than grouse from undisturbed leks.³ According to this study, impacts of oil and gas development to sage-grouse include direct habitat loss from new construction, increased human activity and noise causing displacement, and direct mortality associated with reserve pits. Furthermore, researchers have documented a correlation between human footprint and sage-grouse persistence and performance in altered landscapes, providing important insights into impacts of anthropogenic changes in landscape (Aldridge 2000, Braun et al. 2002, Holloran 2005, Naugle et al. 2010).

All other impacts are the same as those described in the Kemmerer, Rawlins, and Green River RMPs as they relate to Greater sage-grouse.

4.2.2.2 Other wildlife (Avian, Aquatic, and Terrestrial)

Post-lease actions (construction and drilling) during the plover breeding and nesting period (April 10 to July 10) in the vicinity of plover nests (if plovers actually inhabit any of the parcels) may cause unnecessary impacts to nesting birds, such as egg or hatchling abandonment. Operations during the breeding season could result in reduced breeding success.

Conservation recommendations under the required biological opinion written by the USFWS on behalf of the endangered and sensitive Bear River, Platte River, and Colorado River fishes shall be adhered to.

Surface disturbing and/or disruptive activities from February 1 to July 31, or up to September 15th in the case of burrowing owls, may cause impacts to nesting raptors, including burrowing owls if they are present in the area. The primary impact would be from nesting disturbance

which could result in nest abandonment, and/or increased egg and chick mortality. Site-specific wildlife surveys would be developed at the APD stage.

Well-pad, road, and pipeline development into areas currently void of surface disturbance could result in habitat fragmentation, which depending on the intensity of the development, vegetative cover, and terrain could affect a variety of ground dwelling species, such as but not limited to Greater sage-grouse, Wyoming pocket gopher, white-tailed prairie dog, mule deer, pronghorn, and elk. Should post-lease development actually occur on any of the parcels, the related surface disturbance could result in short-term and long-term losses of wildlife habitat. Short-term habitat loss would include all initial surface disturbance associated with the project. This short-term disturbance typically would be ongoing until those portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance are reclaimed. Long-term habitat loss would include those portions of the pad needed for production operations for the life of the well and travel path and shoulders of the access roads. Impacts of surface disturbing activities, such as oil and gas development to ground dwelling species including Wyoming pocket gopher and white-tailed prairie dog could include direct habitat loss from new construction, behavioral changes from increased human activity and associated noise, and direct mortality associated crushing due to vehicular movements and construction activities.

Water depletions for well pad and road construction, well drilling, well completion operations, pipeline hydrostatic testing, and dust abatement could potentially reduce stream flows in the Bear, Colorado, and Platte River systems, which could affect threatened and endangered fish species in those river systems. The depletion quantities would vary depending on the number of wells being drilled and completed and whether or not non-contributing sources of water could be utilized. Currently, water use to drill one well ranges between 1 and 6 million gallons. In fracturing a well, companies have estimated that generally they use a ratio of 0.5 percent hydraulic chemical fluid mix to 1.5 million gallons of water (Paschke, Dr. Suzanne. USGS, Denver, Colorado. September 2011).

All depletions in these river systems are subject the USFWS mitigation requirements (depletion fund payments); specific project proposals resulting in a “*may affect, likely to adversely affect*” determination are required to undergo formal consultation with the USFWS before any project approval. Surface disturbance resulting from oil and gas development in proximity to streams and rivers could result in increased siltation. Any increased siltation would depend on the amount of surface disturbance, its proximity to live water, and erosion control measures implemented. Any lease-related construction activities in or through the riparian/surface water areas within a parcel could affect amphibian and reptilian species using those resources. Surface disturbance in or adjacent to or water extractions from the Henry’s Fork in parcels 157, 159, 181, 196, or 200; or from the Little Snake River and Savery Creek and tributaries in parcels 9, 10-18, 25-28, 38, or 43 would potentially affect the conservation population of Colorado River cutthroat trout and/or the population expansion potential in those streams through increased siltation and hydrocarbon/chemical spills.

4.2.2.3 Mitigation

As prescribed by the Kemmerer, Rawlins, and Green River RMPs, wildlife impacts at the leasing stage would be mitigated through seasonal restrictions and controlled surface use where applicable. See Table 4.1a, Parts 1 & 2 for a reference to the stipulations to be applied and to Appendix B for the specific wildlife stipulations applied to each parcel. Based on these

stipulations, the impacts to wildlife identified in the governing RMPs/FEISs were determined not to be significant. This EA identifies similar impacts; implementation and adherence to these stipulations though this EA is expected to achieve analogous results. In the event lease development is proposed, BMPs such as directional drilling, multiple wells per pad, well pad siting, etc. could be implemented to mitigate site-specific impacts to wildlife throughout their habitats, including but not limited to birth and crucial winter habitat, as well migration routes. Additionally, BLM would implement the guidelines in Wyoming Game and Fish Department's (WGFD) "Recommendations for Development of Oil and Gas Resources within Crucial and Important Habitat", (2010) to the extent practicable.

Water depletions would be mitigated through the payment to the depletion funds with FWS at the time of extraction. Impacts to streams, fisheries, riparian habitat, and aquatic species would be mitigated through application of the requirements in Lease Notice No. 1 or special lease stipulations; such as the restriction on surface disturbing activities within 500' of riparian habitat. Spills would be mitigated through measures required through Spill Prevention Control and Countermeasure Plan should development occur within a parcel. A controlled surface use stipulation is applied to all offered parcels and provides protection for current and future threatened, endangered, and special status species.

4.2.3 Lands with Wilderness Characteristics

Under this alternative, 136 whole parcels and 17 partial parcels would be offered. Parcels 45, 46, 62-66 fall within the Adobe Town DRUA that was developed through the Rawlins RMP analysis of a citizen's wilderness proposal. Additionally, approximately 145 acres along the southern edge of parcel 46 are in an area within the Rawlins Field Office identified as having wilderness characteristics. Based on a 2002 inventory, the Rawlins RMP determined "the lands to be unmanageable for wilderness character because of preexisting oil and gas leases, the BLM elected to manage lands with wilderness character for multiple use and not for protection of wilderness character. Accordingly, measures to provide protection for any wilderness characteristics of lands (outside of previously established WSAs) will not be considered in the alternatives in this RMP. This is consistent with BLM policy as presented in BLM IM 2003-275." which was corroborated by a BLM interdisciplinary team review in July 2011, which is in accordance with BLM IM 2011-154." The 2002 inventory was corroborated by a BLM interdisciplinary team review in July, 2011. Parcels 62-66 are within the Kinney Rim South citizen wilderness proposal (CWP), which the 2002 inventory the concluded "*does not have supplemental values. Due to the abundance of human impacts, the area was determined not to have wilderness characteristics.*"

Offering parcels that have been determined to not contain wilderness characteristics would not impact wilderness characteristics or preclude the BLM's ability to determine manageability for lands with wilderness characteristics during a land use planning process. Oil and gas development in the portion of parcel 46 in the area with wilderness characteristics would potentially degrade those values and result in that portion of the parcel (approximately 145 acres) being redesignated as no longer having conditions that meet the wilderness characteristics criteria. It is important to note that parcels 45 and 46 are within ¾ to 1½ miles of existing oil and gas development to the north, east, and south. Additionally both parcels are bisected by a constructed road; consequently it is not expected that development on these parcels would result in a substantial increase in impacts to wilderness characteristics or the dispersed recreation

values in the Adobe Town Dispersed Recreation Use Area. Leasing these parcels is consistent with the Rawlins RMP. Table 4-1 Parts 1 and 2 and Appendix B provide the stipulations based on the Rawlins RMP that would be applied to the parcels. One of those stipulations is a Controlled Surface Use stipulation that provides for the protection of the Adobe Town Dispersed Recreation Use Area, which would include the LWC values in the southern portion of the parcel 46. Parcels 062-066 also fall within the DRUA and are constrained by the Controlled Surface Use stipulation that provides for the protection of the Adobe Town Dispersed Recreation Use Area. The area containing parcels 062-066 already contains existing oil and gas development in the form of a constructed road and reclaimed well pad. Additional development would not be expected to substantially increase the impacts to the DRUA.

4.2.3.1 Mitigation

Apply the Controlled Surface Use stipulation to parcel 46 and 62-66 for protection of the Adobe Town Dispersed Recreation Use Area.

4.2.4 Cultural and Paleontological Resources

Once the decision is made by the lessee to develop a lease, area specific cultural records review would be done to determine if there is a need for a detailed cultural inventory of those areas that could be affected by the subsequent surface disturbing activities. Generally, a cultural inventory will be required and all identified historic and archaeological sites that are eligible for listing in the National Register of Historic Places or potentially eligible to be listed would be either avoided by the undertaking or have the information in the sites extracted through archaeological data recovery before surface disturbance. Offering lease parcels for sale would not, in and of itself, impact historic or prehistoric resources. Development within the viewshed of contributing segments of National Historic Trails, as well as other trails where the setting is important, could impact the trail setting, the extent of potential impacts cannot be determine absent a specific surface use or occupancy proposal.

A site and resource inventory and mitigation process similar to that described for cultural resources also applies to paleontological resources.

4.2.4.1 Mitigation

Lease Notice No. 2 is applied to all parcels offered for leasing. Avoidance measures would be imposed wherever eligible cultural and/or paleontological resources are potentially impacted including no surface occupancy and controlled surface use for designated National Register for Historic Places and National Historic Trails (refer to Table 4.1a and Appendix B for the parcels with cultural and historic stipulations).

4.2.5 Soils

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to soils. Subsequent development of the lease would physically disturb the topsoil and would expose the substratum soil on subsequent project areas. Direct impacts resulting from the oil and gas construction of well pads, access roads, and reserve pits include removal of vegetation, exposure of the soil, mixing of horizons, compaction, loss of top soil productivity and susceptibility to wind and water erosion. Wind erosion could be a moderate contributor to soil erosion given the average wind speeds in the area. Dust from vehicle traffic would also be a

factor. Indirect impacts such as runoff, erosion and off-site sedimentation could result from construction and operation of well sites, access roads, gas pipelines and facilities.

Contamination of soil from drilling and production wastes mixed into soil or spilled on the soil surfaces could cause a long-term reduction in site productivity. Some of these direct impacts can be reduced or avoided through proper design, construction and maintenance, and implementation of best management practices.

Additional soil impacts associated with lease development would occur when heavy precipitation causes water erosion damage. When water saturated segment(s) of the access road become impassable, vehicles may still be driven over the road. Consequently, deep tire ruts would develop. Where impassable segments are created from deep rutting, unauthorized driving may occur outside the designated route of access roads. Unsuccessful reclamation could result in increased erosion and reduced soil productivity.

Based on the Kemmerer, Rawlins, and Green River RMPs, surface disturbance is restricted or prohibited on slopes over 25 percent and also within floodplains; consequently impacts to these resources/landforms are not anticipated from post-leasing development. The requirements in the BLM Wyoming Reclamation Policy would be implemented for all surface disturbing activities. In accordance with the policy additional pre-disturbance and pre-reclamation data may be required when soils with a low potential for reclamation are impacted.

4.2.5.1 Mitigation

The operator would stockpile the topsoil from the surface of well pads which would be used for surface reclamation of the well pads. The impact to the soil would be remedied upon reclamation of well pads when the stockpiled soil that was specifically conserved to establish a seed-bed is spread over well pads and vegetation re-establishes.

Reserve pits would be closed, re-contoured and reseeded as described in COAs attached to APDs. Upon abandonment of wells and/or when access roads are no longer in service the Authorized Officer would issue instructions and/or orders for surface reclamation/restoration of the disturbed areas.

Lease Notice No.1 restricts surface disturbance on slopes greater than 25 percent.

4.2.6 Vegetation

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to vegetation. Impacts to vegetation, both direct and indirect, would occur when the lease is developed in the future. The potential impacts would be analyzed on a site specific basis before oil and gas development.

Should post-lease development actually occur on any of the parcels, the related surface disturbance would result in short-term and long-term losses of vegetation. Short-term vegetation loss would include all initial surface disturbance associated with the project until those portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance are reclaimed. Long-term habitat loss would include those portions of the pad needed for production operations for the life of the well and travel path and shoulders of the access roads. Both short-term and long-term losses of vegetation would result in a commensurate reduction foraging habitat available for wildlife and livestock. Vegetation loss

could also potentially correlate to a reduction in nesting habitat for ground nesting avian species, as well as a loss of hiding cover for certain avian and mammalian species.

Parcels 179, 181, 196, and 199-202 contain portions of the Special Status Plants (SSP) Species ACEC for *Arabis pucilla*, *Astragalus proimanthus*, *Descurainia torulosa*, and *Thelesperma, pubescens* in the Rock Springs Field Office. The ACEEC objective is to prevent the loss of plants and habitat and to ensure continued existence of the species. Refer to the Green River RMP/FEIS and the Green River RMP/ROD for more information on the *Arabis pucilla*, *Astragalus proimanthus*, *Descurainia torulosa*, and *Thelesperma, pubescens*.

Surface disturbance and increased dust or other pollutants within areas containing special status plant species result in the loss of individual plants or groups of plants; however the species specific no surface occupancy stipulation and the special status species controlled surface use (CSU) stipulation prohibits or restricts activity in such areas; consequently impacts are expected to be negligible. The NSO for *Arabis pucilla*, *Astragalus proimanthus*, *Descurainia torulosa*, and *Thelesperma, pubescens* meets the intent of providing maximum protection for the plant species while providing access to mineral resources.

4.2.6.1 Mitigation

Refer to Table 4.1a and Appendix B for parcels with the Special Status Species CSU stipulation. Additionally, the area within the ACEC is closed to surface occupancy and surface disturbing activities, such as lease mineral exploration and development activities and construction (i.e., NSO).

4.2.7 Invasive, Non-native Species

The act of offering, selling, and issuing federal oil and gas leases does not produce invasive/non-native species impacts. Subsequent development produces impacts in the form of surface disturbance. The construction of an access road and well pad may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seed could be carried to and from the project areas by numerous methods, including construction equipment, the drilling rig and transport vehicles. The main mechanism for seed dispersion on the road and well pad is by equipment and vehicles that were previously used and or driven across or through noxious weed infested areas. The potential for the dissemination of invasive and noxious weed seed may be elevated by the use of construction equipment typically contracted out to companies that may be from other areas.

Invasive plant species can affect the quality of sage-grouse habitat. The Bureau of Land Management National Sage-grouse Habitat Conservation Strategy, 2004, states, “Quality habitat for sage-grouse includes a diverse plant community (relative to the potential of the site) with appropriate vegetation heights and structure. Appropriate quality habitat for sage-grouse also varies by season. For example, on winter range, sagebrush is the key species upon which to focus management or restoration. Conversely, in spring brood-rearing habitat, understory diversity (with the associated insects) as well as sagebrush overstory are both required. An example of reduced habitat quality is an area that burned and recovered to a mixed stand of invasive and native herbaceous species with minimal sagebrush cover, or an area that has not burned but shows a decline in herbaceous understory.”

4.2.7.1 Mitigation

In the event noxious weeds are discovered during construction of any access roads and well pads, measures will be taken to mitigate those impacts. Washing and decontaminating the equipment entering and exiting the construction areas would minimize this impact. Additionally, seed mixes used for reclamation are required to be certified weed-free and all Operators must have an approved Weed Management Plan.

4.2.8 Wastes, Hazardous or Solid

The lease parcels fall under environmental regulations that impact exploration and production waste management and disposal practices and impose responsibility and liability for protection of human health and the environment from harmful waste management practices or discharges.

Any potential for waste impact would not occur until post-lease development activities are initiated. Impacts could be in the form of drilling fluid spills, solid chemical spills, fuel spills, trash scatter on and off the well pads, and hydrocarbon or gas releases.

4.2.8.1 Mitigation

The lease sale parcels are regulated under the Resource Conservation and Recovery Act (RCRA), Subtitle C regulations, which are extremely stringent. As well as, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which provides for the exclusion of petroleum (including crude oil or any fraction thereof) from the definition of hazardous substance, pollutant, or contaminant. Additionally, waste management requirements are included in the 12 point surface use plan and the 9 point drilling plan attached to the APDs. Companies would be required to have approved Spill Prevention Control and Countermeasure Plans, if the applicable requirements of 40 CFR 112 are met, and comply with NTL-3A for reporting of undesirable events.

4.2.9 Water Quality: Surface and Groundwater

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to water quality. Subsequent development of the lease can lead to surface disturbance from the construction of well pads, access roads, pipelines, and powerlines, which can result in degradation of surface water quality and groundwater quality from nonpoint source pollution, point source pollution including spills, increased soil losses, and increased gully erosion. Surface disturbance associated with well-drilling (pad/road/pipeline construction) close to (less than 500 feet) the wetland/riparian areas and/or floodplains discussed in the Affected Environment section could increase silt loads in these watercourses. Production facilities in floodplains could result in down channel hydrocarbon discharge during a flooding event. As required, BLM would manage floodplains and activities within floodplains in accordance with Executive Order 11988.

Potential direct impacts that would occur due to construction of well pads, access roads, pipelines, and powerlines include increased surface water runoff and off-site sedimentation brought about by soil disturbance; increased salt loading and water quality impairment of surface waters; channel morphology changes due to road and pipeline crossings; and possible contamination of surface waters by produced water discharged at the surface, and uncontrolled and unremediated spills.

The magnitude of these impacts to water resources would depend on the proximity of the disturbance to the drainage channel, slope aspect, and gradient, degree and area of soil

disturbance, soil character, duration and time within which construction activity would occur, and the timely implementation and success or failure of mitigation measures.

Direct impacts to surface water would likely be greatest shortly after the start of construction activities and would likely decrease in time due to natural stabilization, and reclamation efforts. Impacts to groundwater would be less evident and occur on a longer time scale. Construction activities would occur over a relatively short period; therefore, the majority of the disturbance would be short-term. Spills or produced fluids (e.g., saltwater, oil, fracking chemicals, and/or condensate in the event of a breach, overflow, or spill from storage tanks) could result in contamination of the soil onsite, or offsite, and may potentially impact surface and groundwater resources in the long term.

Petroleum products and other chemicals could result in groundwater contamination through a variety of operational sources including but not limited to pipeline and well casing failure, well (gas and water) construction, and spills. Similarly, improper construction and management of reserve and evaporation pits could degrade ground water quality through leakage and leaching. Authorization of the proposed projects would require full compliance with local, state, and federal directives and stipulations that relate to surface and groundwater protection. Currently, water use to drill one well ranges between 1 and 6 million gallons. In fracturing a well, companies have estimated that generally they use a ratio of 0.5 percent hydraulic chemical fluid mix to 1.5 million gallons of water. That translates to a minimum of 5,000 gallons of chemicals into one well for every 1.5 million gallons of water used to fracture a well (Paschke, Dr. Suzanne. USGS, Denver, Colorado. September 2011).

Oil and gas wells are cased and cemented at a depth below all usable water zones; consequently impacts to water quality at springs, including the City of Rawlins water supply springs, and residential wells are not expected. However, faulty cementing or well casing could result in methane migration to upper zones. Should hydrocarbon or associated chemicals for oil and gas development in excess of EPA/WDEQ standards for minimum concentration levels migrate into culinary water supply wells, springs, or systems, it could result in these water sources becoming non-potable. Some industrial water wells in the Pinedale Anticline and Jonah Fields have experienced detections of hydrocarbon in the water. Most of these detections were below the maximum containment levels (MCL) established by the Environmental Protection Agency. A few wells have exceeded the MCL and have or are undergoing voluntary remediation with the Wyoming Department of Environmental Quality. Studies to date have not concluded a definitive cause of the contaminations. Water wells developed for oil and gas drilling could result in a draw down in the quantity of water in the residential wells and at the Rawlins Municipal water supply springs depending upon the geology; however it is not possible to predict whether or not such water wells would be developed at this point in time. Industrial water supply wells would require state permits and approval by the BLM at the APD stage; potential impacts would be mitigated at that time.

4.2.9.1 Mitigation

Lease Notice No. 1 is applied to all lease parcels and restricts surface disturbing activities within 500 feet of surface water and/or riparian areas to protect the water and riparian resources and within ¼ mile of occupied residences. The use of practices such as but not limited to closed-loop mud systems or plastic-lined reserve pits would reduce or eliminate seepage of drilling fluid into the soil and eventually reaching groundwater. The casing and cementing requirements imposed

on proposed wells would reduce or eliminate the potential for groundwater contamination from drilling muds and other surface sources. Additional mitigation could include, but would not be limited to: the use of recycled water for drilling below the surface casing zone, installation of backflow preventers, drilling oil and gas related water wells to aquifers below those providing residential water and then cementing from the nearest shale/clay zone below the deepest culinary/livestock water well in the vicinity back to the surface, and insuring that access to water wells is only provided to authorized users. By using the lowest quality water necessary and cementing the water well to surface will reduce the chances that oil and gas related water wells are not drawing from the aquifers providing the residential water or allowing the mixing of lower quality waters with potable sources. Additionally, when drilling with oil-base mud, or in areas where shallow groundwater may be encountered, the use of closed-loop or semi-closed loop drilling systems may be required. Floodplains would be managed in accordance with Executive Order 11988.

4.2.10 Watershed – Hydrology

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts watersheds. Subsequent development of a lease may result in long term and short term alterations to the hydrologic regime. Peak flow and low flow of perennial streams, ephemeral, intermittent rivers and streams and their associate would be directly affected in the short-term by an increase in impervious surfaces resulting from the construction of the well pad and road. The potential hydrologic effect to peak flow is reduced infiltration where surface flows can move more quickly to perennial or intermittent/ephemeral rivers and streams, causing peak flow to occur earlier and to be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. The potential hydrologic effect to low flow is reduced surface storage and groundwater recharge, resulting in reduced base flow to perennial and intermittent/ephemeral rivers and streams. The direct impact would be that hydrologic processes may be altered where the perennial, ephemeral, and intermittent river and stream system responds by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Minor long-term direct and indirect impacts to the watershed and hydrology could continue for the life of surface disturbance from water discharge from roads, road ditches, and well pads, but would decrease once all well pads and road surfacing material has been removed and reclamation of well pads, access roads, pipelines, and powerlines has taken place. Interim reclamation of the portion of the well pad not needed for production operation, as well as revegetating the portion of the pad that is needed for production operations, as well as revegetating road ditches would reduce this long term impact. Short term direct and indirect impacts to the watershed and hydrology from access roads that are not surfaced with impervious materials would occur and would likely decrease in time due to reclamation efforts.

4.2.10. Mitigation

Stormwater Pollution Prevention and Control Plans are required by the State of Wyoming before any surface disturbance associated with construction actions greater than 1 acre in size. On a case by case basis, the Authorized Officer may require additional erosion control measures to reduce the volume of surface runoff and subsequent sediment transport. The operator would stockpile the topsoil from the surface of well pads which would be used for surface reclamation of the well pads. Reserve pits would be re-contoured and reseeded as described in the APD COA. Upon abandonment of the wells and/or when access roads are no longer in service the

Authorized Officer would issue instructions and/or orders for surface reclamation/restoration of the disturbed areas as described in the APD COA. Implement interim reclamation BMP measures.

4.2.11 Livestock Grazing

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to livestock grazing. Subsequent development of a lease may generate impacts to livestock. Post-lease development would result in short-term and long-term losses of vegetation (see Section 4.7), which correlates to short-term and long-term losses of livestock forage. Short-term losses would be until the portions of a well pad not needed for production operations, road disturbance outside the shoulders, and the pipeline disturbance, are reclaimed with established vegetation. Long-term losses would be the portions of the pad needed for production operations for the life of the well, as well as the maintained portions of the access roads. Increased traffic associated with well-field development increases the possibility of animals being injured or killed in collisions with vehicles.

4.2.11.1 Mitigation

Reclaim and revegetate all disturbed areas not needed for well production operations. Avoid range improvements by 500 feet (standard Lease Notice No. 1). Avoid of livestock trailing routes. Secure reserve pits and production facilities against livestock entry with cattleguards, fences and gates would reduce adverse effects to livestock.

4.2.12 Recreation

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to the recreational use of public land. Subsequent development of a lease may generate impacts to recreation activities. For public land areas that are small or land-locked by private or state land, recreation opportunities would be limited or non-existent due to land ownership or access restrictions. Recreational use on larger blocks of public land and on smaller blocks of public land where there is public access, including areas with citizen proposed wilderness could be impacted by post-lease oil and gas development. The quality of the recreational experience would likely be diminished by oil and gas development operations. Recreation on split estate lands would be at the discretion of the private landowner.

Construction and drilling operations would potentially cause game animals and birds to move away from the activity. Studies have shown that animals have moved 2 miles or more from logging operations and other similar activities. Studies also show that elk avoid areas within 1-2 miles of roads (Powell, Jacob. "Distribution, Habitat Use Patterns, and Elk Response to Human Disturbance in the Jack Morrow Hills, Wyoming". May 2003. M.S., Department of Zoology and Physiology, University of Wyoming). If post-lease development operations coincide with hunting season, it is expected that hunters would experience reduced success rates within a 2-mile area of the activity. It is also likely that some hunters would experience a diminished quality in their hunting adventure. Hunting success could potentially increase in areas beyond the 2 miles. In addition to facilitating mineral extraction, new oil and gas roads would also provide better access to the lease areas for recreational opportunities but can also result in increased poaching activities. However, the presence of oil and gas facilities would likely diminish the recreational experience. A decline in recreational use of an area due oil and gas development would potentially affect local, state, and regional revenues generated through the recreational. The level of economic decline would depend on type and level of use and the level

of decline. Section 3.2.2.10 provides some economic values derived from recreational use of the public lands.

A portion of Lot 12 of Section 4, T12N, R88W of parcel 008 corner abuts the Battle Mountain Research Natural Area (RNA) on the Medicine Bow National Forest. No portion parcel 008 or Lot 12 extends onto the National Forest, but even if it did a decision to lease parcel 008 is compatible with the Record of Decision for the Medicine Bow National Forest Revised Lands and Resource Management Plan (LRMP) which specifically allows oil and gas leasing to occur within NRAs (Refer to Section B 5 on page 5 of the LRMP at <http://www.fs.usda.gov/detail/mbr/landmanagement/planning>). Additionally the piece of parcel 008 that abuts the RNA note the 45-foot width of lot 12 is too narrow for the construction of a well pad and the rest of parcel 008 is more than $\frac{3}{8}$ mile from the RNA. Offering parcel 008 is not expected affect the RNA.

Parcels 009, 010, 011 and 012 abut the Medicine Bow National Forest in areas that are available for oil and gas leasing. Offering these parcels would be compatible with the ROD for the LRMP.

4.2.12.1 Mitigation

Development activities would be restricted within $\frac{1}{2}$ mile of developed recreation sites. Additional mitigation and/or COAs, such as additional seasonal restrictions or BMPs such as directional drilling, liquids gather systems, pad drilling, etc. could be identified at the development stage to further reduce impacts associated with oil and gas development.

A Special Lease Notice would be attached to the lease parcel requiring the “lease holder along with the Bureau of Land Management Rawlins Field Office to coordinate proposed development activity on Lot 12 with the Brush Creek/Hayden Ranger District” in help insure the Research Natural Area values are maintained

4.2.13 Visual Resources

Visual resource management is broken into four VRM classes. The parcels addressed through Alternative B contain Classes II, III and IV.

The VRM Class II objective is to retain existing landscape character. The level of change to the characteristic landscape should be low. Management activities should not attract the attention of the casual observer. Changes would be required to repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Modifications to a proposal would be required if the proposed change cannot be adequately mitigated to retain the character of the landscape. Depending on the production nature of the well site, multiple low-profile condensate and/or oil or produced water tanks would be necessary to accommodate the project.

The VRM Class III objective is to partially retain existing landscape character. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate a casual observer's view. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Facilities, such as produced water, condensate or oil storage tanks that rise above eight feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic

landscape and vegetation, which have flat, horizontal to slightly rolling form and line. The construction of an access road, well pad and other ancillary facilities, other than facilities greater in height than thirteen feet, would slightly modify the existing area visual resources. Facilities, such as condensate and produced water or oil storage tanks that rise above thirteen feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line.

The VRM Class IV objective is to provide for management activities which require major modification of the existing landscape character. Every attempt, however, should be made to reduce or eliminate activity impacts through careful location, minimal disturbance, and repeating the basic landscape elements. Facilities, such as condensate and produced water or oil storage tanks that rise above thirteen feet, would provide a geometrically strong vertical and horizontal visual contrast in form and line to the characteristic landscape and vegetation, which have flat, horizontal to slightly rolling form and line. The construction of an access road, well pad and other ancillary facilities would slightly modify the existing area visual resources.

Since well locations cannot be accurately determined at the leasing stage, it is not possible to accurately predict the visual impacts. Development intensity, terrain, and proximity to visual receptors (e.g., main travel corridors, towns, recreation facilities, etc.) will greatly influence the VRM impacts. For example, a single well pad screened by terrain at an area absent of visual receptors would have low to negligible impacts in Class III or IV areas; whereas well pads developed next to a major travel route on in the viewshed of a town or recreation facility may have substantial impact. It is possible that post-lease industrial development could result in portions or all of a VRM area to be downgraded to a lower classification.

4.2.13.1 Mitigation

The flat colors Shale Green, Covert Green, or Shadow Gray from the Standard Environmental Colors Chart would be used on all facilities to closely approximate the vegetation within the setting. All facilities, including the meter buildings, would be painted one of these colors as determined during a site-specific review, unless other colors more closely match the surrounding landscape. Facility painting schemes also may include camouflage patterns or other management practices to reduce facility visibility or visual contrast in particularly sensitive areas. If the proposed area is in a scenic corridor use of landscape features for screening, use of low profile tanks, and/or offsite production may be recommended. A controlled surface use (CSU) stipulation would be applied to all parcels containing lands with a VRM Class II designation; see Table 4.1a and Appendix B. Additional measures may be required at the development stage.

4.2.14 Public Health and Safety

The act of offering, selling, and issuing federal oil and gas leases does not produce impacts to public health and safety. Subsequent development of a lease may generate impacts. Vehicle and equipment operations associated with the subsequent construction, drilling, and production operations could affect members of the public using the same roads and general areas. Releases of gas from the well bore, production facilities and spills could potentially adversely affect members of the public in the vicinity. The level of affect would depend on the product released or spilled, level of activity, density of development, technological controls, and the receptors susceptibility. Parcels 229, 230, 236, and 238 contain areas that are within 10,000 feet of the Bridger Airport. Drill rigs operating within this 10,000 foot zone would potentially create a

hazard to approaching and departing air traffic. A collision with a drill rig would likely result in fatalities in the aircraft and on the drill rig. Parcels 238, 239, 247, and 248 contain rural residential subdivisions and parcels 1-4, 8-20, 25-28, 30, 36, 59, 60, 62-64, 75, 196-199, 203-206, 221-228, 230, 231, 238-240, 245-249, and 251 contain land with private surface overlying federal minerals (i.e. split-estate). The private surface lands have or have the potential to contain private residences and associate facilities such as domestic water supply wells. Residences near active drilling and completion operations would likely experience increased traffic and noise, as well as night lighting. Traffic and drilling operations in close proximity to residences would increase the potential for collisions with the residents, pets, and livestock, as well as an increased potential for fire, hydrocarbon release, and explosion from well blow-out during drilling operations.

4.2.14.1 Mitigation

Prepare and implement safety contingency plans and comply with Onshore Order No. 6, 43 CFR 3162.5-1, and NTL-3A. Parcels 229, 230, 236, and 238 have controlled surface use stipulation restriction for a 10,000 foot distance from the airport runway.

Lease Notice No. 1 restricts or prohibits surface disturbance within ¼ mile of occupied dwellings and is applied to all parcels to mitigate impacts to private residences.

4.2.15 Socio-economics

Under this alternative, 136 parcels and 17 partial parcels would be offered for sale. Additionally, 82 entire parcels and 17 - parcels (180,978.18 acres) would be partially deferred and/or partially deleted from the May 2012 sale. It is assumed that development of the offered leases would proceed at about the same rate of development that the Kemmerer, Rawlins, and Rock Springs Field Offices have experienced over the last ten years, i.e., about 690 wells spudded per year. Specific economic impacts would be identified in the NEPA document supporting the APD, when a more accurate analysis is possible based on the speculative nature of leasing in relation to development. The acreage deferred from leasing under Alternative B would potentially result in at least \$368,872.56 fewer dollars in lease sale revenues than would potentially be attained through implementation of Alternative C. Additionally, the state and county portion of the revenues that could be generated from the sale of deferred parcels would be foregone during the deferral period. Likewise, state and county portions of revenues that could be generated from development of the referenced parcels would at least temporarily be foregone.

A water supply pipeline for the City of Rawlins crosses portions of parcels WY-1205-016 and 019. Should post lease development occur on this parcel, well pad, road, and/or pipeline construction could inadvertently damage the water supply pipeline and disrupt the water supply to Rawlins.

4.2.15.1 Mitigation

Invite the City of Rawlins to participate in onsite reviews for well pad, road, or pipeline construction proposals associated with parcel WY-1205-016 and 019 to insure components of the city water supply system or avoided or otherwise mitigated to protect the City's water supply.

4.2.16 Environmental Justice

No minority or low income populations would be directly affected in the vicinity of the proposed actions from subsequent proposed oil or gas projects. Indirect impacts could include impacts due to overall employment opportunities related to the oil and gas and service support industry in the

region, as well as the economic benefits to state and county governments related to royalty payments and severance taxes.

4.2.16.1 Mitigation

None

4.2.17 Solid Leasable (Coal)

There are no impacts to coal from the offering and issuance of the lease parcels; however to ensure no conflicts arise, parcels WY-1205-071 and 246 are subject to the CSU for Coal/Oil and Gas Conflict Special Lease Stipulations for protecting the first in time valid existing rights of the lessee.

4.2.17.1 Mitigation

See Table 4.1a and Appendix B

4.2.18 Other Considerations per IM 2010-117.

A. There is a risk of drainage to Federal mineral resources due to development of nearby non-Federal parcels if the parcel is not leased.

None has been determined.

B. In undeveloped areas, are non-mineral resource values greater than potential mineral development values?

All of parcels addressed in this EA have multiple surface resource values (see the affected environment discussions above). Whether the surface resource values for a given parcel are greater or less than the potential oil and gas development potential is subjective. Persons interested in preserving the surface resources would very likely say those values are greater than the potential mineral development value; whereas somebody interested in securing and developing one of the leases would likely say that the mineral value is greater. The Kemmerer, Rawlins, Green River RMPs have addressed values of the lands containing the parcels in this EA and have made resource allocations. Parcels 29, 37, 39, and 81-86, as well as portions of 26, 28, 40, 79, 80, 86, 87, 90, 101, 105, and 111 fell within areas where the surface resource values were determined to be greater than the mineral resource values, hence these parcel are not available to be offered for lease. The rest of the parcels fall in areas that are available for oil and gas leasing. Many of these areas have a moderate or higher potential to contain oil and gas resources. For example, figure 12 of the Oil & Gas Reasonable Foreseeable Development (RFD) Scenario for the Rawlins RMP shows the area contain parcel 045, 046, and 062-066 has a high potential for oil and gas occurrence. Figure 23 shows the area has a moderate or higher potential for that resource to be developed. This doesn't mean mineral development is given a higher priority. All of the parcels have stipulations intended to mitigate impacts to the surface resource values.

C. Stipulation constraints in existing or proposed leases make access to and/or development of the parcel or adjacent parcels operationally infeasible, such as an NSO parcel blocking access to parcels beyond it or consecutive and overlapping timing restrictions that do not allow sufficient time to drill or produce the lease without harm to affected wildlife resources.

Parcels 161-166, 170, 175, 177-179, 188, 195, 204, 233, 238, and 239 do not have seasonal timing limitation stipulations. The rest of the parcels have one or more timing limitation stipulations. The vast majority of the parcels have multiple timing limitation stipulations that restrict activity from November 15 through July 31. Oil and gas operators have successfully conducted operations within the portion of the year falling outside these restrictions for the past 2 to 3 decades.

D. Parcel configurations would lead to unacceptable impacts to resources on the parcels or on surrounding lands and cannot be remedied by reconfiguring.

While there are a number of parcels that have one or more disconnected components, accessing and developing would not result in any impacts beyond those addressed in this EA. The EA has not identified any unacceptable/unmitigatable impacts from the configuration of those parcels with disconnected components, nor has it identified that there would be unacceptable/unmitigatable from all or portions of a parcel.

E. The topographic, soils, and hydrologic properties of the surface will not allow successful final landform restoration and revegetation in conformance with the standards found in Chapter 6 of the Gold Book, as revised.

A number of the parcels have areas with slopes greater than 25 percent. Construction on such slopes would increase the difficulty of achieving successful reclamation and landform restoration; however standard lease stipulations restrict or prohibit occupation on these slopes. Additionally, parcels with these slopes also have areas with lesser slopes that are suitable for construction where there would be a high potential for successful reclamation. Many of the parcels fall within the 7 to 9 inch annual precipitation range. These drier sites also hamper successful reclamation, but there are procedures, such as strategic irrigation, hydro-mulching, etc. available to assist with achieving the Gold Book reclamation standards.

F. Construction and use of new access roads or upgrading existing access roads to an isolated parcel would have unacceptable impacts to important resource values.

As previously stated, at the leasing stage BLM does not have proposals for development, consequently it is not possible to predict where or if oil or gas development would occur. Likewise BLM cannot predict where or if access roads for oil and gas development would be proposed. Without a concrete development access road proposal, BLM cannot determine whether or not road development to or within a given parcels would or would not have unacceptable impacts. The following provides information on roads that occur on or within the vicinity of the parcels.

Parcel 1 is bordered on the west side by Albany County Road 59. Parcel 2 is bisected by I-80. Parcel 3 bordered on the south by I-80. Parcel 4 is within a mile of, and parcels 5-7 are

bisected by Carbon County Road 272. Parcel 8 adjoins Wyoming State Highway 70. Parcel 9 is bisected by Carbon County Road 754. Parcel 10 adjoins Carbon County Road 401. Parcel 11 is within 1 mile of Forest Road 877. Parcel 12 is within ½ mile of Forest Road 876. Parcel 13 is within 1 mile of Carbon County Road 602 and contains a constructed road. Parcels 14 and 15 are bisected by Carbon County Road 602. Parcel 16 bisect by Carbon County Road 506W. Parcel 17 is bisected by Carbon County Road 602. Parcels 18 and 19 have a constructed road. Parcel 20 is within ½ mile Carbon County Roads 401 and 505W. Parcels 21-23 contain constructed roads. Parcel 24 adjoins US Highway 287. A portion of parcel 25 adjoins Carbon County Road 752. Portions of parcel 26 adjoin Carbon County Roads 503 and 602. Parcel 27 is bisected by Carbon County Road 602. Parcel 28 is bisected by Carbon County Road 503. Parcel 29 is bisected by BLM Road 3301. Parcels 30-32 contain constructed roads. Parcel 33 is within ¾ mile of Carbon County Road 503. Parcel 34 is bisected by Carbon County Road 503. Parcels 35 and 36 are within a mile of BLM Road 3309. Parcels 37 and 38 contain segments of Carbon County Road 608. Parcels 39-42 are in the Atlantic Rim Natural Gas Field. Parcel 43 is within ½ mile of Carbon County Road 700. Parcel 44 is within ½ mile of an upgraded constructed road. Parcels 45 and 46 are within ¾ to 1½ miles of existing constructed roads and wells pads and contain two-tracks that could be upgraded. Parcels 45 and 46 are also bisected by a constructed road. Parcels 49-56 are surrounded by constructed road and contain two-tracks that could be up grades Parcel 57-61 contain constructed roads. Parcel 65 contains a constructed road and reclaimed well pad. Parcels 62, 63, 64, and 66 are within a mile of the road and well pad and contain two-tracks that could be upgraded. Parcel 67 contains a constructed road. Parcel 68 contains a segment of Sweetwater County Road 21. Parcel 70 contains a segment of Sweetwater County Road 24. Parcel 71 adjoins the Black Butte Coal Mine. Parcel 72 contains a constructed road. Parcels 73-76 and 94 adjoin Wyoming State Highway 430. Parcel 77 is within 1½ mile of Sweetwater County Road 24. Parcel 78 is within 2 miles of Sweetwater County Road 74 contains two-tracks that could be upgraded. Parcels 79, 80, 82, 84, and 85 contain segments of Sweetwater County Road 74. Parcels 81 and 83 are within a mile of Sweetwater County Road 74. Parcels 86, 87, 90, and 92 are bisected by Wyoming State Highway 28. Parcels 88, 89, and 91 contain a constructed road. Parcel 93 is within ½ mile of a constructed road. Parcel 94 and 95 are bisected by a constructed road. Parcels 96-100 are within 3 miles of State Highway 28 and Sweetwater County Road 21 and contain two-tracks that could be upgraded. Parcels 101-104 adjoin State Highway 28. Parcel 105 is bisected by Sweetwater County Road 446. Parcels 106, 107, 109 are within 1 mile of Sweetwater County Road 446 and/or Highway 28. Parcel 108 adjoins Highway 28. Parcel 110 is within ½ mile of and parcel 111 is within 1½ miles of BLM Road 4413. Parcel 112-114 are with ½ to 1½ miles of Sweetwater County Road 21. Parcel 118, 121, and 123 adjoin or are bisected by Highway 28. Parcels 116, 117, 120 and 122 adjoin BLM Road 4106. Parcels Parcel 115 and 119 are within a mile of BLM Road 4106 or State Highway 28. Parcel 124 adjoins Sweetwater County Road 446. Parcels 126 and 128-131 contain a constructed road. Parcels 125, 127, and 132 are within 2 miles of a constructed or county road. Parcel 133 adjoins Highway 28. Parcels 134, 137, and 138 are bisected by BLM Road 4106. Parcels 135, 136, 139 are within a mile of BLM Road 4106 or Sweetwater County Road 118. Parcel 140, 141, 143, 144, and 146 are bisected by BLM Road 4106 or 4108. Parcel 142 and 145 are within ½ mile of Sweetwater County Road 118. Parcels 147, 149, 151, 153, and 154 are bisected by Sweetwater County Road 118. Parcels 148, 150 152, and 155 contain numerous two-tracks that could be upgraded. Parcel 156 is within ½ mile of State Highway 530. Parcels 158 1nd 158 are bisected by State Highway 530. Parcel 157

contains two-track roads that could be upgraded. Parcel 160-165 and 167 contain two-track roads. Parcel 166 is within ½ mile of BLM Road 4311. Parcels 168 and 169 are bisected by a constructed road. Parcel 170 contains an oil and gas access road. Parcels 171-173 are bisected by Sweetwater County Road 13. Parcel 174 is within ½ mile of State Highway 414. Parcels 175 and 176 contain segments of Sweetwater County Road 1. Parcels 177-181 contain two-track roads that could be upgraded and are bisected by a powerline. Parcels 182-189 are adjoined or are bisected by Sweetwater County Road 1, BLM Road 4317, and/or other constructed roads. Parcel 191 is within ½ mile of a constructed road. Parcels 192-195 are bisected by a constructed road. Parcels 196 and 197 adjoin or are bisected by State Highway 414. Parcels 198 and 199 are within ½ mile of State Highway 414. Parcels 199-202 are bisected by or are within ½ mile of Sweetwater County Road 1. Parcels 203-206 are in the Moxa Arch Natural Gas Field and are bisected or are surrounded by constructed roads. Parcels 207 and 208 are bisected by BLM Road 4202. Parcels 209 and 210 are in the East LaBarge Natural Gas Field and are bisected or are surrounded by constructed roads. Parcel 211 is bisected by Uinta County Road 254. Parcel 212 is within ½ mile of BLM Road 4315. Parcels 213-215 are bisected by a constructed road. Parcel 216 is within ½ mile of State Highway 240. Parcel 217 is bisected by a constructed road. Parcel 218 adjoins Uinta County road 254. Parcel 219 is bisected by I-80. Parcel 220 contains two-track roads that could be upgraded. Parcel 221-227 are bisected by county roads. Parcel 228 adjoins State Highway 410. Parcels 229-231 are bisected by Uinta County Road 223. Parcels 232 and 237 are bisected by the UP Railroad. Parcel 233 is within a mile of State Highway 412. Parcel 234-236 are bisected by State Highway 412. Parcels 238 and 239 are bisected by Lincoln County Road 319. Parcel 240 is bisected by US Highway 189. Parcel 241 is bisected by State Highway 412. Parcels 242 and 243 contain constructed roads. Parcels 244 and 245 adjoin or are bisected by the UP Railroad. Parcels 246-248 are bisected by Lincoln County Road 306. Parcel 249 adjoins Lincoln County Road 207. Parcel 250 is within ½ mile of Lincoln County Road 207. Parcel 251 adjoins State Highway 89. Parcel 252 is within 1½ miles of an oil and gas exploration road.

G. Leasing would result in unacceptable impacts to the resources or values of any unit of the National Park System or national wildlife refuge.

None of the parcels are within the proximity of a National Park. Parcels 249-251 are in the vicinity of the southern and western boundaries of the Cokeville Meadows National Wildlife Refuge. Parcel 250 is located on area formerly occupied by a phosphate mine. The parcel is approximately ¼ mile south of the Cokeville Meadows NWR outside the refuge boundary and is approximately ¾ mile north of Twin Creek. The parcel is approximately 1.5 miles northwest of the Twin Creek fish barrier. Parcel 250 does not fall within BLM lands within the Cokeville Meadows NWR being considered for transfer to the FWS.

The Cokeville Meadows National Wildlife Refuge:

- Provides wetland habitat for migratory, summer breeding, and resident birds as well as numerous conservation-priority non-game species (Fish and Wildlife Service 1990, 1992, 2002a; Nicholoff 2003; Wyoming Game and Fish Dept 2005).
- Is considered an important bird area, over 65 species of water birds have been observed in the Cokeville Meadows NWR area, with 32 recorded as nesting species. Sora, Forster's tern, greater sandhill crane, redhead, trumpeter swan and Wilson's phalarope all utilize the wetland and riparian areas on the refuge and the surrounding

- area. The refuge supports one of the highest densities of nesting waterfowl in Wyoming, and was historically recognized as the best redhead duck production area in the state. It is situated on one of the main migration corridors for the species in their movement to the Texas Gulf Coast. The area also supports numerous other diving and dabbling duck species such as northern pintail, canvasback and cinnamon teal, and breeding and migratory populations of greater sandhill cranes.
- Contains other wetland-associated species include colonies of white-faced ibis, snowy egret, long-billed curlew, black tern, great blue heron, American bittern, black-crowned night heron, and numerous other marsh and shorebirds. Bald eagles commonly use the area in spring and fall while peregrine falcons can be seen during migration. The occasional whooping crane has been seen using the area in the summer, while rough-legged hawk, and northern shrike are common winter residents. Riparian areas support populations of migratory birds including the olive-sided flycatcher, western wood peewee, and yellow warbler.
 - In conjunction with adjacent BLM, state of Wyoming, and private lands provides upland habitat for species such as Greater Sage-grouse, Brewer's sparrow, short-eared owl, burrowing owl, mountain plover, sage thrasher, sage sparrow, ferruginous hawk, small mammals such as the pygmy rabbit. Big game species such as mule deer, elk, and pronghorn use the area for its water resources and wintering grounds. Many upland and big game species depend on water resources and wintering grounds found in the area. Grizzly bear, black bear, wolverine, and lynx use the upper portion of the Bear River watershed.
 - Contains tributaries in the upper reaches of the Bear River that were never inundated by historic Lake Bonneville and fishes there evolved in a riverine system. Fluvial reproduction patterns are common with fish moving from large rivers to small streams for spawning. Aquatic habitat in the area supports populations of Bear River Bonneville cutthroat trout, bluehead sucker, leatherside chub, mountain whitefish, mottled and Paiute sculpin, longnose and speckled dace, redside shiners, Utah and mountain suckers, as well as northern leopard frogs.

Leasing the portions of parcels 249-251 with the stipulations specified in Appendix B and Tables 4.2a and 4.2b is not anticipated to have unacceptable impacts to the Refuge or its resources

H. Leasing would result in unacceptable impacts to specially designated areas (whether Federal or non-Federal) and would be incompatible with the purpose of the designation.

Affected Environment Table 3.2 provides a listing of the parcels that contain ACECs, SMAs, and SRMAs. The Kemmerer, Rawlins, and Green River RMPs provide for oil and gas leasing in these areas with the appropriate stipulations.

4.3 Impacts of Alternative C (Maximum Parcel Offering)

Alternative C would have essentially the same impacts as those described for the Proposed Action. The primary difference between the alternatives is that Alternative C would offer 243 parcels for lease sale versus 136 entire and 17 partial parcels under Alternative B. Table 4.1a shows the resources and corresponding stipulations/mitigation that are to be applied to the Alternative C parcels. Alternative C would result in the offering of additional parcels located Greater sage-grouse key habitat areas; if sold they could potentially be subjected to post-lease

disturbance and associated impacts, resulting in a potential loss of Greater sage-grouse key habitats and precluding the management of such for conservation efforts. Alternative C would result in more acreage being offered for lease than Alternative B would. This would potentially result in more wells and surface disturbance, and a commensurately higher emissions discharge to the atmosphere if development was to be deemed viable. Alternative C would also result in areas that may contain lands with wilderness characteristics being leased, which could impact or impair those characteristics. A loss of Greater sage-grouse key habitat area and/or wilderness characteristics could result in an irretrievable commitment of a resource.

4.4 Cumulative Impacts

Offering the subject parcels for lease, and the subsequent issuance of leases, in and of itself, would not result in any cumulative impacts. The referenced RMPs/EISs provide cumulative affects analysis for oil and gas development based on the reasonable, foreseeable oil and gas development scenario. This analysis is here by incorporated by reference. The offering of the proposed lease parcels is consistent with that analysis. As discussed in Section 1.3, it is assumed that any development on those leases would occur within the RDF level analyzed in the EISs for the governing RMPs and that the impacts would also be within the thresholds of identified in the EISs. And as stated in Section 1.1, “The mitigation measures developed through those EISs reduced/minimized the anticipated impacts associated with the projected development to acceptable levels below the significance threshold”; therefore, since the proposed parcels are within areas designated by the RMPs as available for oil and gas leasing and development and as such are a subset of the RMP, it is anticipated that this will also hold evident for the parcels. As depicted through research on the Pinedale Anticline, it is conceivable that environmental impacts associated with development within a given parcel could be higher or lower than those anticipated in the EISs; however across the spectrum of the parcels proposed for offer it is anticipated on average impacts would be within the range analyzed in the EISs. Again, it is important to emphasize that at the leasing stage is not possible to predict if a parcel would be leased; if it is leased whether or not it would be developed; and if it is developed at what intensity/spacing, which is why additional NEPA is required when a definitive development proposal is received.

Subsequent to the issuance of the RMPs, additional projects, such as the Gateway West, TransWest, and Gateway South transmission lines, as well as the Chokecherry-Sierra Madre, Sand Hills Ranch, and White Mountain Wind Energy Development Projects, and the Normally Pressured Lance Oil and Gas Development Project have arisen. The EISs/EAs being prepared for those projects will address the cumulative effects of those individual projects in conjunction with each other and other ongoing projects. As stated Section 1.3, additional site-specific NEPA analysis will be conducted in the event a development proposal is submitted for one or more of the parcels addressed in this EA. This site-specific analysis will address the cumulative effects of that development in conjunction with other project within the cumulative affects area.

The following provides cumulative impacts information related to Air Quality/Green House Gases/Climate Change: There are approximately 13,300 federal producing wells in the High Desert District (5000 in Rawlins FO, 900 in Kemmerer FO, 2700 in Rock Springs FO, and 4700 in Pinedale FO). Of this number, approximately 424 wells (3.2%) are coal-bed methane wells. Analysis of cumulative impacts for RFD of oil and gas wells on public lands is included in the Kemmerer, Rawlins, and Green River RMPs. Potential development of all available federal

minerals in the field offices, including those in the proposed lease parcels, was included as part of the analysis.

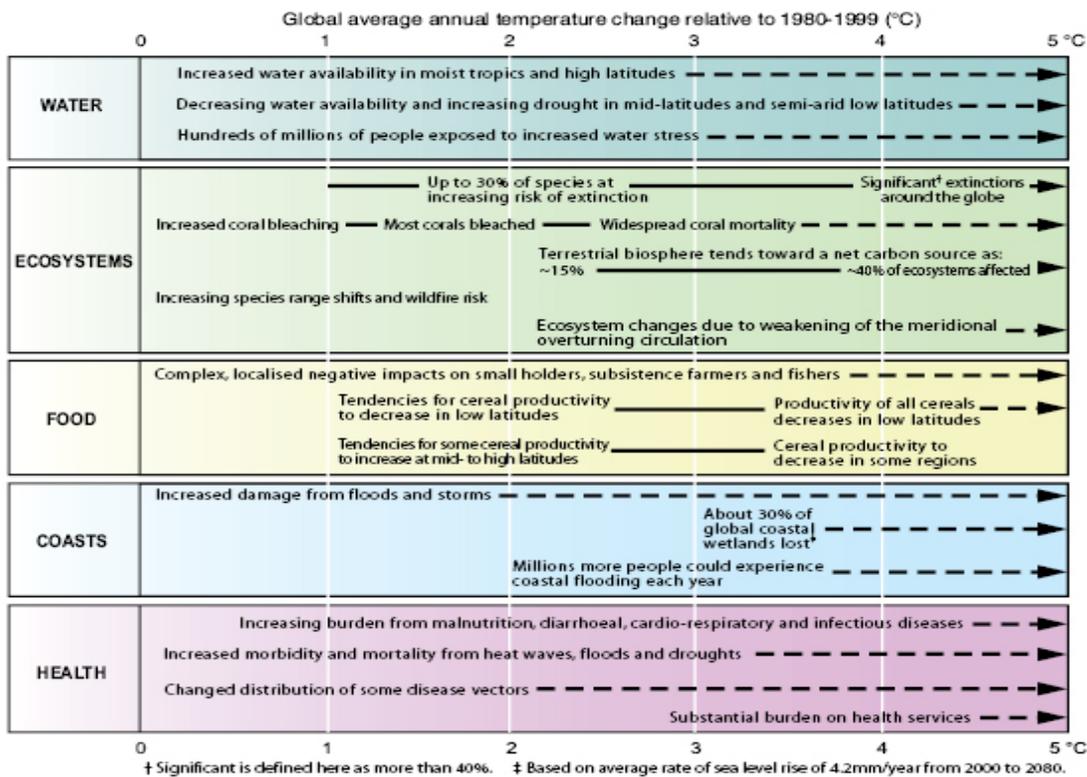
As described in the analysis of environmental consequences, the proposed action and/or the alternative may contribute to the effects of climate change through GHG emissions. However, it is not currently possible to associate any of these particular actions with the creation of any specific climate-related environmental effects. The lack of scientific tools designed to predict climate change at regional or local scales limits the ability to quantify potential future impacts.

The assessment of greenhouse gas emissions and climate change is still in its formative phase; therefore, it is not yet possible to know with confidence the net impact on climate. However, the Intergovernmental Panel on Climate Change (IPCC 2007) recently concluded that “warming of the climate system is unequivocal” and “most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic [man-made] GHG concentrations.” As the temperatures of the land and sea change, environmental factors such as weather patterns, sea levels, precipitation rates, the timing of the seasons, desert distribution, forest cover, and ocean salinity will also change. These changes influence the world’s climate systems and will have different impacts to different areas. Some agricultural regions may become more arid while others become wetter; some mountainous areas will experience greater summer precipitation, yet experience disappearing snowpack. Wildlife responses to such environmental changes, such as alteration of migration routes or timing, expansion or contraction of suitable habitat, changes in predatory or foraging habits, or changes in reproductive habits or fecundity may occur but cannot be predicted.

The average number of oil and gas wells drilled annually in the HDD and probable GHG emission levels, when compared to the total GHG emission estimates from the total number of federal oil and gas wells in the state, represent an incremental contribution to the total regional and global GHG emission levels. This incremental contribution to global GHG gases cannot be translated into incremental effects on climate change globally or in the area of these site-specific actions. As oil and gas and natural gas production technology continues to improve in the future, one assumption is that it may be feasible to further reduce GHG emissions.

Based on research compiled for the International Panel on Climate Change Fourth Assessment Report, 2007, potential effects of climate change on resources in the affected environment are likely to be varied. Figure 4.4.1, taken from the Fourth Assessment Report indicates varying responses of the natural world to increasing temperatures as a result of increasing global temperatures.

Figure 4.4.1: Examples of impacts associated with global average temperature change (Impacts will vary by extent of adaptation, rate of temperature change and socio-economic pathway).



Within North America, the report specifically forecasts that: Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources; in the early decades of the century, moderate climate change is projected to increase aggregate yields of rain-fed agriculture by 5 to 20%, but with important variability among regions; major challenges are projected for crops that are near the warm end of their suitable range or which depend on highly utilized water resources; cities that currently experience heat waves are expected to be further challenged by an increased number, intensity and duration of heat waves during the course of the century, with potential for adverse health impacts and coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution. Specific modeling and/or assessments of the potential effects for the HDD and for the State of Wyoming currently do not exist.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) pointed out that by the year 2100, global average surface temperatures would increase 2.5 to 10.4°F above 1990 levels (IPCC 2007). The National Academy of Sciences (2006) has confirmed these findings, but also indicated that there are uncertainties regarding how climate change may affect different regions. Computer model forecasts indicate that increases in temperature will not be evenly or equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

Regarding the linkage between climate change related warming and associated impacts, an assessment of the IPCC states that difficulties remain in attributing observed temperature

changes at smaller than continental scales. Therefore, it is currently beyond the scope of existing science to predict climate change on regional or local scales resulting from specific sources of GHG emissions. Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development project is proposed.

IPCC also discloses that significant uncertainties remain with respect to the estimates of the current level of emissions and projections of future production of fossil fuels as the oil and gas industry is difficult to forecast with the mix of drivers: economics, resource supply, demand, and regulatory procedures. The assumptions used for the projections, based on recent trends or State production trends in the near-term, and AEO 2006 growth rates through 2020, do not include any significant changes in energy prices, relative to today's prices. Large price swings, resource limitations, or changes in regulations could significantly change future production and the associated GHG emissions. Other uncertainties include the volume of GHGs vented from gas processing facilities in the future, any commercial oil shale or coal-to-liquids production, and potential emissions-reducing improvements in oil and gas production, processing, and pipeline technologies.

4.5 Irreversible and Irretrievable Commitments of Resources

An irreversible commitment of a resource is one that cannot be reversed (e.g., the extinction of a species, disturbance to protected cultural resources, or extraction of fossil fuels); irreversible commitments of resources are actions which disturb or remove either a non-renewable resource or a renewable resource to the point that it can only be renewed over a long period of time (centuries); a resource is irreversibly committed when a decision or action alters the resource so that it cannot be restored or returned to its original or predisturbance condition; and, the resource or its productivity or its utility would be consumed, committed, or lost forever. Definitions of an irretrievable commitment of resources include: An irretrievable commitment of a resource caused by a management action or land use decision is one that directly removes the resource from availability or that renders its productivity or utility lost for a period of time (e.g., closure of an area to resource extraction); an irretrievable commitment is the loss of opportunities for production or use of a renewable resource for a short to medium period of time (years); or, a resource is irretrievably committed when a decision results in the loss of production or future use of the resource.

The administrative action of offering and issuing an oil and gas lease does not, in and of itself, directly result in an irreversible or irretrievable commitment of resources; however post-lease development could result in such commitment of resources. For example soil lost through wind or water erosion from construction activities for an oil and gas well pad, access road, or pipeline would be considered irreversible and/or irretrievable. Irreversible and/or irretrievable commitment of resources that could potentially result from post-lease oil and gas development on the May 2012 lease parcels would be within the irreversible and irretrievable commitment of resources analyzed and disclosed in the EISs for the Rawlins, Kemmerer, and Green River RMPs.

5.0 Description of Mitigating Measures and Residual Impacts

The lease sale will be mitigated by attaching appropriate conditions of approval to any subsequent requests for lease development either on a case by case basis or upon receipt of a project proposal (see Table 4.1a and Appendix B). The KFO, RFO, and RSFO Surface Use and Occupancy Requirements, Conditions of Approval, and the Special Leasing Stipulations as

specified in the respective RMPs provide adequate mitigation for issuance of all lease parcels under the Proposed Action.

Direct, indirect, cumulative and residual impacts of leasing and lease development are generally described in the Kemmerer, Rawlins, and Green River RMP FEISs and RODs. An environmental analysis will be prepared on a case-by-case basis upon receipt of future subsequent actions.

6.0 Consultation/Coordination

WYOMING GAME AND FISH DEPARTMENT (WGFD)

Rawlins FO - Wyoming Game and Fish personal (Martin Hicks, Rich Guenzel, Greg Hiatt, Terry Creekmore, Mark Zornes, Will Schultz, and Tony Mong) were emailed the preliminary lease list on August 8, 2011 and the layer shape file on August 9th. No comments were received.

Kemmerer FO - A list of the lease parcels and request for comments was submitted to Mark Zornes and the Green River WGFD Office via email on August 26, 2011. Mr. Zornes has not provided any parcel specific comments. No comments were received

Rock Springs Field Office submitted a review and comment request to Rick Huber at the WGFD Cheyenne Office on October 13, 2011 and received the following response on October 17th: "After reviewing the May 2012 Lease List, it appears that the BLM has applied the appropriate stipulations for those leases that have not been deferred or pulled."

BUREAU OF RECLAMATION

Bureau of Reclamation (John Lawson) was emailed the preliminary lease list on 8/9/11. No response was received.

US FOREST SERVICE

The Brush Creek-Hayden Ranger District Office of the Medicine Bow-Route National Forest was contacted by the Rawlins Field Office. Comments were received from Steve Loose, Wildlife Biologist; Heather Schultz, Environmental Coordinator; Katie Driver, Botanist; and Shawn Anderson, Fishery Biologist.

US FISH AND WILDLIFE SERVICE

David Lucas at the USFWS Regional Office in Denver and Carl Milligan, Refuge Manager for Seedskaadee and Cokeville Meadows NWRs were provided a courtesy email on October 27, 2011 providing the website for the May 2012 EA. No Comments were received.

6.1 List of Preparers/Reviewers

RAWLINS FIELD OFFICE

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Cade Powell	Natural Resource Specialist
Ray Ogle	Natural Resource Specialist
Patrick Walker	Archeologist

Frank Blomquist	Wildlife Biologist
Kelly Fischer	Wildlife Technician
Mike Calton	Range Management Specialist
Mark Newman	Geologist
Lynn McCarthy	GIS Specialist
Annette Treat	Reality Specialist
Jennifer Fleuret	Hydrologists
Jerry Gregson	Wyoming Game and Fish Biologist
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Dennis Carpenter	Field Manager

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Carol Harwood	Production Accountability Technician
Tricia Harris	Office Automation Clerk

ROCK SPRINGS FIELD OFFICE

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Jo Foster	Outdoor Recreation Planner
Jim Glennon	Botanist
John Henderson	Fisheries Biologist
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Breelyn Van Fleet	Archeologist
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Cherette Mastny	Range Management Specialist
Bob Price	Range Management Specialist
Lance Porter	Field Manager
Gavin Lovell	Assistant Field Manager for Natural Resources
Dan Thomas	Geologist
Douglas Kile	GIS Specialist

HIGH DESERT DISTRICT OFFICE

Bill Lanning	Resource Advisor for Mineral and Lands
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BLM WYOMING STATE OFFICE

Julie Weaver	Supervisory Mineral Leasing Specialist
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Travis Bargsten Physical Scientist
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7.1 Authorities

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